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Epidemiologic Notes and Reports

Green Tobacco Sickness in Tobacco Harvesters — Kentucky, 1992

Green tobacco sickness (GTS) is an illness resulting from dermal exposure to dissolved nicotine from wet tobacco leaves; it is characterized by nausea, vomiting, weakness, and dizziness and sometimes fluctuations in blood pressure or heart rate (*1–3*). On September 14, 1992, the Occupational Health Nurses in Agricultural Communities (OHNAC) project of Kentucky* received reports of 27 cases of GTS. The cases occurred among tobacco harvesters who had sought treatment in several hospital emergency departments in south-central Kentucky during the preceding 2 weeks. This report summarizes the findings of the investigation of these cases.

On September 15, OHNAC staff initiated a review of inpatient and emergency department medical records from May 1 through October 2 at five hospitals in the Bowling Green and Elizabethtown areas. The review identified 55 persons in whom GTS, nicotine poisoning, or other illnesses compatible with GTS symptomatology had been diagnosed. On September 25, industrial hygienists from CDC's National Institute for Occupational Safety and Health (NIOSH) observed the tobacco-harvesting process. Worker's hands, forearms, thighs, and backs received the most dermal exposure to wet tobacco. Dew from tobacco leaves often saturated workers' clothing within minutes of beginning field work.

To evaluate possible risk factors associated with GTS, NIOSH investigators and occupational health nurses from the OHNAC project conducted a case-control study. A case was defined as an emergency department diagnosis of GTS or nicotine poisoning in a person whose recorded work history included tobacco harvesting at the time of illness. Forty-nine persons met the case definition, with episodes occurring from July 25 through September 19, 1992; two cases were subsequently excluded from analysis because illness onset coincided with exposure to pesticides (which can induce similar symptoms). Median age of the 47 case-patients was 29 years (range:

*OHNAC is a national surveillance program conducted by CDC's National Institute for Occupational Safety and Health (NIOSH) that has placed public health nurses in rural communities and hospitals in 10 states (California, Georgia, Iowa, Kentucky, Maine, Minnesota, New York, North Carolina, North Dakota, and Ohio) to conduct surveillance of agriculture-related illnesses and injuries that occur among farmers and their family members. These surveillance data are used to reduce the risk for occupational illness and injury in agricultural populations.

Green Tobacco Sickness — Continued

14–54 years); 41 (87%) were male. Controls were 83 asymptomatic tobacco harvesters referred by case-patients or local agricultural extension agents. Their median age was 39 years (range: 16–70 years); 72 (87%) were male.

Twelve (26%) case-patients were hospitalized for 1–2 days; of these, two (4%) required intensive-care treatment for hypotension and bradycardia. All case-patients were initially treated in emergency departments with antiemetic drugs, and 35 (74%) received intravenous fluids.

Forty of 47 case-patients and 83 controls were administered a questionnaire by telephone. Respondents were asked about the types of jobs performed during the tobacco growing season, use of protective clothing, exposure to wet tobacco leaves, work in wet clothing, work duration, and personal tobacco use.

Among the 40 case-patients who completed interviews, the median time from starting work to onset of illness was 10 hours (range: 3–17 hours); most frequently reported symptoms included weakness (100%), nausea (98%), vomiting (91%), dizziness (91%), abdominal cramps (70%), headache (60%), and difficulty breathing (60%). The mean duration of illness was 2.4 days. Thirty-six (90%) had previous work experience with tobacco. Of these, 14 (39%) had previously sought medical care for symptoms suggestive of GTS. Seventeen (85%) of 20 case-patients aged ≥30 years attributed their illness to working in wet tobacco, compared with 12 (60%) case-patients aged <30 years.

Age <30 years was a risk factor for illness (odds ratio [OR]=3.1; 95% confidence interval [CI]=1.4–7.0). All case-patients and 69 (83%) controls had worked in fields of wet tobacco where their clothes became wet (OR=infinite; lower confidence limit=1.8). Current use of personal tobacco products (i.e., cigarettes, snuff, chewing tobacco, pipe, or cigars) appeared to be weakly protective, but the estimate was not statistically significant (OR=0.7; 95% CI=0.3–1.5). Sex and work duration (i.e., number of hours per day or number of days per week) were not associated with illness. The reported use of protective clothing was similar for case-patients and controls; for case-patients and controls combined, reported use of protective items worn at least once during the growing season was 5% for waterproof clothing and 32% for gloves.

Representative hospital costs were calculated for three levels of care received by 31 case-patients treated at two participating hospitals. Fees averaged $250 for outpatient treatment, $566 for hospital admission, and $2041 for intensive-care treatment.

Reported By: B Boylan, MS, Lincoln Trail District Health Dept, Elizabethtown; V Brandt, Barren River District Health Dept, Bowling Green; J Muehlbauer, Buffalo Trace District Health Dept, Maysville; M Auslander, DVM, C Spurlock, PhD, Injury Epidemiology Section; R Finger, MD, State Epidemiologist, Kentucky Dept for Health Svcs. Hazard Evaluations and Technical Assistance Br, and Surveillance Br, Div of Surveillance, Hazard Evaluations, and Field Studies, National Institute for Occupational Safety and Health, CDC.

Editorial Note: Before 1992, no cases of GTS had been reported to Kentucky public health agencies. Increased surveillance of adverse health events in persons working in agriculture and increased awareness of the condition may explain the reports in Kentucky during this harvest season (i.e., late summer). Before the NIOSH investigation was initiated, OHNAC occupational health nurses had supplied emergency department physicians with literature about GTS. In addition, rainfall during the 1992 season was uncharacteristically heavy, potentially increasing exposure to wet tobacco and incidence of GTS.

Green Tobacco Sickness — Continued

The lower risk for GTS among older workers may result from work practices developed over time that reduce contact with wet tobacco. In addition, workers likely to develop symptoms of GTS may leave this work force at a young age. One potential limitation to these findings is that the age distribution of controls may not reflect the local population of tobacco workers.

Personal use of tobacco products may be weakly protective, probably because of development of tolerance to the effects of nicotine among regular tobacco users. Tolerance may not be protective if dermal absorption substantially exceeds the user's customary nicotine intake (*4*), which may have occurred in this outbreak because of heavier than usual rains.

Approximately 60,000 persons harvest tobacco annually in Kentucky at least part-time (*5*). The estimated crude 2-month incidence rate of hospital-treated GTS among tobacco workers in the five-county study area was 10 per 1000 workers.[†] Statewide extrapolation of this incidence rate suggests as many as 600 persons in Kentucky could have sought emergency department care for the condition. However, this figure may underestimate the true incidence of GTS because many affected persons may not seek hospital treatment (*2*).

Use of protective clothing (e.g., water-resistant clothing and rubber gloves) reduces the amount of nicotine absorbed by workers in contact with green tobacco (*6,7*). Tobacco farm owners should inform their employees of the hazards associated with harvesting wet tobacco and the importance of safe work practices in preventing GTS; discuss routes of exposure and symptoms associated with the disease; advise workers to change into clean, dry clothing and boots during the work day if these become wet; and allow flexible work hours to avoid work during or immediately after a rainfall. Health-care providers in areas where tobacco is harvested should consider GTS in workers who present with symptoms similar to those reported here.

To determine whether GTS regularly occurs or whether this outbreak was due to an unusually wet growing season, the OHNAC project of Kentucky will continue active surveillance for GTS in local hospitals and clinics during tobacco growing seasons. The Kentucky Department for Health Services will disseminate information on GTS to health-care professionals and institutions statewide. Workers will be informed about the condition and preventive measures through the Cooperative Extension Service and through press releases to community newspapers.

References

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4. Goodman AG, Rall TW, Nies AS, Taylor P, eds. Goodman and Gilman's—the pharmacological basis of therapeutics. New York: Pergamon Press, 1975:548.
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†The denominator for this rate is based on an estimate of 78.8 person-hours worked per acre during tobacco harvest, the number of acres planted with tobacco, and an estimate of 256 harvest-hours worked annually per worker (the median value reported in the Kentucky GTS case-control study). These figures generated an estimate of 4730 tobacco-harvest workers in the five affected counties, of whom 47 sought medical treatment at local hospitals.

Green Tobacco Sickness — Continued

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Emergency Mosquito Control Associated with Hurricane Andrew — Florida and Louisiana, 1992

Hurricane Andrew crossed south Florida on August 24, 1992, entered the Gulf of Mexico, and struck the Louisiana coast on August 26. In Florida, an estimated 25,000 housing units were destroyed and 37,000 severely damaged in a 200,000-acre area in the southern portion of Dade County; in Louisiana, an estimated 25,000 housing units were destroyed or severely damaged by the storm, primarily in the coastal sections of the 36-parish disaster area. Initial assessment of the disaster areas indicated a need for vector surveillance and control (*1*). This report summarizes actions to assess and alleviate mosquito-related problems in Florida and Louisiana.

Persons residing in the affected areas or returning after the initial evacuation were exposed to high densities of mosquitoes (e.g., because of damage to door and window screens and lack of electricity to run air conditioners). In addition to being a nuisance that hampered recovery efforts (e.g., repair and reconstruction crews were unable to work during early morning and late afternoon/early evening hours), this exposure increased the potential for mosquito-transmitted diseases among recovery workers and displaced residents, and secondary bacterial infections of mosquito bites among children were reported in both states.

Florida

Dade County Mosquito Control monitored morning and evening mosquito landing rates at 27 sites beginning September 1. On September 2, carbon dioxide-baited encephalitis vector survey (EVS) traps were placed at eight locations and monitored daily by the U.S. Navy Disease Vector Ecology and Control Center. *Aedes taeniorhynchus* and *Culex nigripalpus* were the predominant mosquito species in the area. Daytime landing rates of nuisance mosquitoes in early September exceeded 20 per minute in sampling sites near coastal sections of the disaster area. During the 50 days following the hurricane, 659,458 acres in Dade County were treated by aerial application of mosquito-control insecticides, resulting in substantially reduced landing rate counts. For example, after one application to 99,000 acres on September 11, landing rates in the area were reduced from an average of 14.3 mosquitoes per minute to 0.4 mosquitoes per minute, and EVS trap collections decreased from an average of 550 *Ae. taeniorhynchus* per night to 20 per night.

Mosquito-based surveillance for St. Louis encephalitis (SLE) was conducted from September 8 through October 15; 28,369 specimens (primarily *Cx. nigripalpus*) in 402 pools were tested by antigen capture enzyme-linked immunosorbent assay (ELISA). No SLE viral antigen was detected.

The presence of competent mosquito vectors (*Ae. aegypti* and *Anopheles quadrimaculatus*) and of recent immigrants from the Caribbean Islands and Latin America raised the possibility of dengue and malaria transmission in Florida. Because mosquito-based surveillance for SLE is unable to detect these diseases, fliers with information on identification and reporting of dengue and malaria were distributed to

Mosquito Control — Continued

health-care workers in the area. No dengue or malaria cases were reported to the Florida Department of Health and Rehabilitative Services.

Louisiana

The disaster area in Louisiana comprised 36 parishes. Nine were considered candidates for a large build-up of nuisance mosquitoes or for transmission of mosquitoborne pathogens because early surveillance indicated that large numbers of mosquitoes were appearing in urban and suburban areas with large human populations. Emergency mosquito surveillance programs were established in eight of the 36 parishes, and existing surveillance programs in three parishes were augmented.

Densities of nuisance mosquitoes were estimated with carbon dioxide-baited CDC light traps and landing/biting surveillance conducted by the parish mosquito-control districts. The number of telephone complaints received by health departments or vector-control agencies were also used to assess mosquito biting activity. The most common nuisance species collected were *Psorophora columbiae*, *Cx. salinarius*, *Psorophora ferox*, and *Ae. sollicitans*. During the 36 days following the hurricane, approximately 788,000 acres were treated by aerial and ground application of mosquito-control insecticides by the cooperating parish mosquito-control programs and private mosquito-control contractors. Pretreatment and posttreatment surveillance indicated immediate but short-term reductions in nuisance mosquitoes.

Before and after the storm, the Louisiana Department of Health and Hospitals and the Louisiana Mosquito Control Association reported no eastern equine encephalitis (EEE) or SLE virus activity in their wild bird sampling program, indicating that transmission of arboviral disease was unlikely following the hurricane. Carbon dioxide-baited CDC light trap collections after the storm were processed for virus detection by the state public health laboratory; 2738 mosquitoes (131 pools) of known or suspected vector species (*Culiseta melanura*, *Coquillettidia perturbans*, *Cx. pipiens quinquefasciatus*, and *Cx. salinarius*) were tested for the presence of EEE and SLE viruses. No arbovirus activity was detected.

Reported by: M Nelms, Dade County Mosquito Control, Miami; US Navy Disease Vector Ecology and Control Center, Naval Air Station, Jacksonville; WR Opp, Florida Dept of Agriculture and Consumer Svcs; Florida Dept of Health and Rehabilitative Svcs. MM Yates, East Baton Rouge Mosquito Abatement and Rodent Control; GM Stokes, Mosquito Control Contractors, Inc, Iberia Parish, New Iberia; BB Broussard, Vermilion Parish Mosquito Control, Abbeville; CL Meek, Louisiana State Univ and Louisiana Mosquito Control Association, Baton Rouge; MJ Keppinger, Louisiana Dept of Agriculture and Forestry; C Anderson, HB Bradford, B Savoie, L McFarland, DrPH, State Epidemiologist, Office of Public Health, Louisiana Dept of Health and Hospitals. Federal Emergency Management Agency, regions 4 and 6. US Air Force 910th Airlift Group, Youngstown Air Reserve Station, Vienna, Ohio. Medical Entomology/Ecology Br, Div of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: In Florida, Dade County nuisance mosquito-population densities after the storm were at approximately normal levels for that time of year, and mosquito species collected were routinely found in large numbers in the area (Dade County Mosquito Control Program, unpublished surveillance data, 1992). Increased human exposure to mosquitoes in the Florida disaster area occurred primarily because of the extensive damage to housing, and mosquito densities that were tolerable before the storm were unacceptable when human exposure increased. In the affected Louisiana parishes, storm-associated rainfall substantially increased nuisance mosquito populations, and displaced persons were exposed to higher than usual mosquito densities.

Mosquito Control — Continued

In East Baton Rouge Parish, landing rate indices were 212 times higher than the September averages for 1983–1991, and light trap indices following the storm were 2.1 times higher than normal in Iberia Parish for 1980–1991.

Federal assistance for emergency vector surveillance and control is available when a disaster is declared and when one or more of the following conditions are met* (*2*): 1) transmission of human or animal disease is in progress or is deemed imminent, 2) reconstruction efforts are substantially hampered by large populations of nuisance species, 3) normal functioning of communities in the disaster area is substantially disrupted, or 4) the large nuisance populations place additional stress on the human population. Mosquito-transmitted pathogens were not detected in either disaster area, and emergency mosquito control was primarily intended to provide relief from high mosquito densities that hampered recovery efforts. Surveillance after control measures were implemented indicated that mosquito populations had decreased markedly.

Although *Cx. nigripalpus*, the vector of SLE virus, is present in Dade County, SLE virus activity in the area is historically low (Florida Department of Health and Rehabilitative Services, unpublished surveillance data). SLE virus activity throughout Florida and Louisiana was low before and after the hurricane, and the potential for SLE virus transmission in the area was low. SLE virus surveillance was initiated because of the increased exposure of the displaced residents and recovery workers to mosquito bites.

In 1989, emergency arbovirus surveillance following Hurricane Hugo was based on virus isolation in cell culture, and all mosquitoes collected were identified and tested. Turnaround time was 2–3 weeks using this protocol. Following Hurricane Andrew, surveillance programs in both disaster areas tested only known vector species using antigen capture ELISA techniques; with this protocol, results were available in 3–6 days. This substantial improvement in turnaround time should enable timely detection and response to a mosquitoborne disease in emergency situations (CDC, unpublished data, 1990).

References

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2. CDC. Centers for Disease Control emergency response plan, 1990. Atlanta: US Department of Health and Human Services, Public Health Service, 1990.

*Federal Emergency Response Plan (Public Law 93-288, as amended April 1992).

Injuries and Illnesses Related to Hurricane Andrew — Louisiana, 1992

On August 26, 1992, Hurricane Andrew struck Louisiana. On August 24, in anticipation of hurricane-related injuries and illnesses, the Office of Public Health (OPH), Louisiana Department of Health and Hospitals, in cooperation with hospital emergency room (ER) and public utility personnel and coroners, established an active emergency surveillance system in 19 parishes to monitor these events. This report summarizes the findings from this emergency surveillance system.

Hurricane Andrew — Continued

A hurricane-related fatal or nonfatal injury/illness was defined as one that occurred from 12 noon August 24 through 12 midnight September 21 that resulted from the preparation for, impact of, or clean-up after the hurricane and required treatment in a hospital ER or caused death. The OPH developed a questionnaire to collect data on demographic variables (i.e., age, sex, marital status, and parish); nature of injury/illness (i.e., cut, fall, electrocution, or rash); body part affected; location, etiology, and time of injury/illness; and reporting institution. To facilitate reporting of these hurricane-related events, the OPH made periodic telephone calls to ER personnel and coroners who had administered the questionnaire to or for persons with injuries/illnesses that met the case definition.

Twenty-one (50%) of 42 hospital ERs, five (26%) of 19 coroners' offices, and one of two public utilities participated in the emergency surveillance system and reported a total of 462 hurricane-related events. Of 406 events with a reported date of occurrence, 15 (4%) occurred before landfall; 70 (17%), during the hurricane; and 321 (79%), after the hurricane (Figure 1, page 249). Of 310 events with a reported place of occurrence, 244 (79%) occurred outside, and most (237 [69%] of 343) occurred in or around the home.

Of the 462 hurricane-related events, 445 (96%) had nonfatal outcomes (Table 1, page 249). Of the 17 (4%) fatal outcomes, eight occurred before the hurricane made landfall: six were due to drowning; one, to an impact injury sustained in a motor-vehicle crash during the evacuation; and one, to a crush injury sustained during a tornado that preceded the hurricane (Figure 1). Of the 445 nonfatal events, 383 (86%) were injuries, and 62 (14%) were illnesses; 319 (72%) occurred among males. The most common nonfatal injury was a cut/laceration/puncture wound (184 [41%] of 445), followed by a strain/sprain (49 [11%]) (Table 1). The most common body parts reported affected by a nonfatal hurricane-related injury/illness were the upper extremities, including the fingers, hands, and arms (157 [38%] of 411), followed by the lower extremities, including the toes, feet, and legs, (89 [22%]).

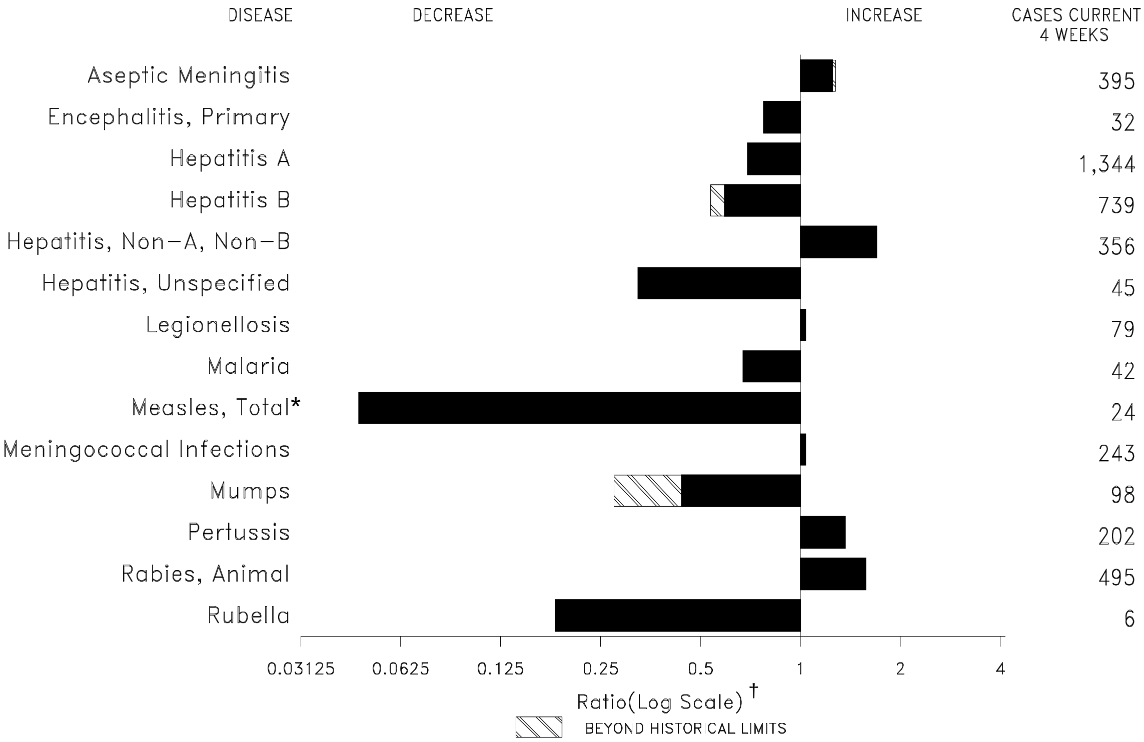
Three parishes—St. Mary's, St. John's, and Iberia—had hurricane-related injury/illness rates higher than 200 per 100,000 population (Figure 2, page 250); two parishes—Iberville and Assumption—had rates of 50–200 per 100,000 population. All other affected parishes had rates less than 50 per 100,000 population.

Reported by: K Kelso, S Wilson, L McFarland, DrPH, State Epidemiologist, Office of Public Health, Louisiana Dept of Health and Hospitals. Disaster Assessment and Epidemiology Section, Health Studies Br, Div of Environmental Hazards and Health Effects, National Center for Environmental Health; Div of Field Epidemiology, Epidemiology Program Office, CDC.

Editorial Note: Emergency surveillance systems can facilitate public health decision-making during natural disasters and have an impact on policies for future disasters. For example, in this report, after Hurricane Andrew made landfall, Louisiana public health officials monitored for outbreaks of diarrheal illness to identify and repair damaged waste-disposal systems and determine allocation of potable water. In addition, previous surveillance during other hurricanes affected the public health response to Hurricane Andrew. Louisiana public health officials were aware that hurricanes trigger secondary effects (such as tornadoes and flash floods) that, together with storm surges, can cause fatalities (e.g., drownings), even before making landfall, and that most injuries/illnesses related to hurricanes occur during the postimpact (i.e., clean-up) phase (*1,2*). Using this information, officials alerted Louisiana residents through

(Continued on page 249)

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending April 3, 1993, with historical data — United States



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

† 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 April 3, 1993 (13th Week)

	Cum. 1993		Cum. 1993
AIDS*	10,300	Measles: imported	8
Anthrax	-	indigenous	61
Botulism: Foodborne	1	Plague	-
Infant	12	Poliomyelitis, Paralytic§	-
Other	1	Psittacosis	17
Brucellosis	17	Rabies, human	-
Cholera	5	Syphilis, primary & secondary	6,817
Congenital rubella syndrome	3	Syphilis, congenital, age < 1 year	-
Diphtheria	-	Tetanus	4
Encephalitis, post-infectious	44	Toxic shock syndrome	64
Gonorrhea	91,613	Trichinosis	7
Haemophilus influenzae (invasive disease)†	337	Tuberculosis	3,855
Hansen Disease	33	Tularemia	14
Leptospirosis	10	Typhoid fever	72
Lyme Disease	660	Typhus fever, tickborne (RMSF)	22

*Updated monthly; last update February 27, 1993.
†Of 315 cases of known age, 114 (36%) were reported among children less than 5 years of age.
§No cases of suspected poliomyelitis have been reported in 1993; 4 cases of suspected poliomyelitis were reported in 1992; 6 of the 9 suspected cases with onset in 1991 were confirmed; all were vaccine associated.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending April 3, 1993, and March 28, 1992 (13th 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	10,300	1,550	123	44	91,613	123,796	5,125	2,563	1,031	144	267	660
NEW ENGLAND	679	38	3	1	2,106	2,702	162	106	1	5	10	63
Maine	8	6	1	-	25	32	8	3	-	-	1	-
N.H.	47	2	-	-	12	38	4	13	-	-	-	6
Vt.	3	5	-	-	9	5	3	2	-	-	-	-
Mass.	403	19	2	1	760	966	90	79	1	5	8	19
R.I.	29	6	-	-	106	205	38	9	-	-	1	19
Conn.	189	-	-	-	1,194	1,456	19	-	-	-	-	19
MID. ATLANTIC	2,506	123	4	4	9,858	12,396	224	282	65	3	55	476
Upstate N.Y.	236	64	-	1	1,953	1,279	94	98	33	1	13	317
N.Y. City	1,841	5	-	-	2,986	5,714	10	1	-	-	-	-
N.J.	195	-	-	-	1,715	1,748	77	84	21	-	7	41
Pa.	234	54	4	3	3,204	3,655	43	99	11	2	35	118
E.N. CENTRAL	787	237	37	8	17,899	23,245	553	264	199	2	73	6
Ohio	137	75	15	-	5,950	7,197	101	63	22	-	40	6
Ind.	277	36	2	3	1,992	2,234	303	51	4	-	10	-
Ill.	106	47	3	-	5,160	6,967	86	26	4	1	-	-
Mich.	224	71	15	5	3,733	5,906	60	122	165	1	19	-
Wis.	43	8	2	-	1,064	941	3	2	4	-	4	-
W.N. CENTRAL	377	76	3	-	4,087	6,253	759	209	45	2	12	17
Minn.	209	10	2	-	320	909	93	17	1	1	-	1
Iowa	40	21	-	-	437	438	7	5	2	1	-	1
Mo.	40	21	-	-	2,316	3,691	511	167	29	-	3	3
N. Dak.	-	1	1	-	10	25	17	-	-	-	-	-
S. Dak.	17	4	-	-	44	52	8	-	-	-	-	-
Nebr.	26	1	-	-	-	8	90	5	7	-	7	-
Kans.	45	18	-	-	960	1,130	33	15	6	-	2	12
S. ATLANTIC	2,357	401	19	20	26,819	41,097	307	397	154	20	53	65
Del.	120	2	1	-	343	431	2	38	48	-	6	45
Md.	222	35	6	-	4,269	4,160	51	73	4	1	14	7
D.C.	176	12	-	-	1,676	2,123	2	7	-	-	7	1
Va.	20	50	7	3	1,915	4,986	48	38	11	10	2	5
W. Va.	3	5	4	-	166	222	-	9	9	-	-	2
N.C.	57	28	1	-	6,750	5,220	12	23	14	-	5	3
S.C.	54	2	-	-	2,166	2,907	4	9	-	-	1	-
Ga.	268	24	-	-	3,593	14,194	32	26	20	-	12	-
Fla.	1,437	243	-	17	5,941	6,854	156	174	48	9	6	2
E.S. CENTRAL	613	90	7	3	10,764	11,671	63	308	257	-	16	3
Ky.	53	43	2	3	1,171	1,242	35	31	3	-	4	-
Tenn.	196	22	4	-	3,457	3,777	16	253	250	-	10	2
Ala.	230	19	1	-	3,653	4,028	10	22	2	-	-	1
Miss.	134	6	-	-	2,483	2,624	2	2	2	-	2	-
W.S. CENTRAL	950	74	10	-	11,330	11,520	365	284	40	33	7	5
Ark.	127	7	-	-	1,494	2,211	13	14	2	-	-	1
La.	172	2	-	-	2,834	1,727	18	28	17	-	2	-
Okla.	108	-	3	-	727	1,326	23	45	12	3	5	4
Tex.	543	65	7	-	6,275	6,256	311	197	9	30	-	-
MOUNTAIN	695	83	7	3	2,613	2,893	1,114	153	69	31	22	2
Mont.	3	-	-	1	13	17	42	4	-	-	1	-
Idaho	20	2	-	-	29	30	71	12	-	1	1	-
Wyo.	18	-	-	-	19	12	4	6	19	-	2	2
Colo.	303	24	3	-	825	1,216	274	16	11	16	1	-
N. Mex.	78	13	1	2	275	231	77	66	20	1	-	-
Ariz.	31	26	2	-	935	864	345	27	6	5	6	-
Utah	77	4	1	-	72	50	287	8	10	8	2	-
Nev.	165	14	-	-	445	473	14	14	3	-	9	-
PACIFIC	1,336	428	33	5	6,137	12,019	1,578	560	201	48	19	23
Wash.	85	-	-	-	925	1,030	180	43	44	3	2	-
Oreg.	88	-	-	-	377	371	32	16	3	-	-	-
Calif.	1,149	403	30	5	4,608	10,293	1,117	493	151	44	15	23
Alaska	4	3	2	-	124	202	224	4	1	-	-	-
Hawaii	10	22	1	-	103	123	25	4	2	1	2	-
Guam	-	-	-	-	12	29	-	1	-	1	-	-
P.R.	522	13	-	-	99	15	12	50	12	-	-	-
V.I.	33	-	-	-	21	25	-	1	-	-	-	-
Amer. Samoa	-	-	-	-	7	10	5	-	-	-	-	-
C.N.M.I.	-	2	-	-	17	9	-	-	-	-	-	-

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

*Updated monthly; last update February 27, 1993.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending April 3, 1993, and March 28, 1992 (13th Week)

Reporting Area	Malaria	Measles (Rubeola) Indigenous		Measles (Rubeola) Imported*		Measles (Rubeola) Total	Menin-gococcal Infections	Mumps		Pertussis			Rubella		
	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	178	1	61	-	8	476	686	42	433	48	629	276	1	34	37
NEW ENGLAND	22	-	32	-	1	7	46	1	4	9	173	32	-	1	4
Maine	-	-	-	-	-	-	3	-	-	2	5	2	-	1	-
N.H.	2	-	-	-	-	-	7	-	-	1	107	13	-	-	-
Vt.	-	-	23	-	1	-	4	-	-	5	28	-	-	-	-
Mass.	10	-	-	-	-	5	27	-	1	-	24	16	-	-	-
R.I.	1	-	1	-	-	-	1	1	2	-	2	-	-	-	4
Conn.	9	-	8	-	-	2	4	-	1	1	7	1	-	-	-
MID. ATLANTIC	23	-	4	-	-	85	80	3	42	9	110	50	-	6	4
Upstate N.Y.	12	-	1	-	-	23	37	1	13	5	42	19	-	1	2
N.Y. City	2	-	-	-	-	25	3	-	-	-	-	3	-	-	-
N.J.	4	-	3	-	-	34	7	-	6	-	20	16	-	4	2
Pa.	5	-	-	-	-	3	33	2	23	4	48	12	-	1	-
E.N. CENTRAL	15	-	-	-	-	9	104	3	73	4	93	26	-	-	6
Ohio	5	-	-	-	-	3	30	3	34	2	69	3	-	-	-
Ind.	3	-	-	-	-	4	19	-	-	1	9	8	-	-	-
Ill.	5	-	-	-	-	1	34	-	20	-	4	5	-	-	6
Mich.	2	-	-	-	-	-	20	-	19	1	10	1	-	-	-
Wis.	-	-	-	-	-	1	1	-	-	-	1	9	-	-	-
W.N. CENTRAL	2	-	-	-	-	3	34	-	13	1	25	16	-	1	1
Minn.	-	-	-	-	-	3	2	-	-	-	-	2	-	-	-
Iowa	1	-	-	-	-	-	3	-	3	-	-	1	-	-	-
Mo.	-	-	-	-	-	-	13	-	6	-	10	8	-	1	-
N. Dak.	-	-	-	-	-	-	-	-	4	-	1	2	-	-	-
S. Dak.	1	-	-	-	-	-	2	-	-	-	1	1	-	-	-
Nebr.	-	-	-	-	-	-	2	-	-	-	4	2	-	-	-
Kans.	-	-	-	-	-	-	12	-	-	1	9	-	-	-	1
S. ATLANTIC	40	1	12	-	2	55	136	12	115	4	45	32	-	2	2
Del.	1	-	-	-	-	-	6	2	3	-	-	-	-	-	-
Md.	6	-	-	-	1	3	13	4	21	-	20	11	-	1	-
D.C.	5	-	-	-	-	-	4	-	-	-	-	-	-	-	-
Va.	3	-	-	-	1	6	13	1	11	2	5	2	-	-	-
W. Va.	2	-	-	-	-	-	4	-	2	-	1	-	-	-	-
N.C.	12	-	-	-	-	15	23	2	59	1	9	6	-	-	-
S.C.	-	-	-	-	-	-	12	-	8	-	2	7	-	-	-
Ga.	2	-	-	-	-	-	37	-	-	-	3	-	-	-	-
Fla.	9	1	12	-	-	31	24	3	11	1	5	6	-	1	2
E.S. CENTRAL	4	-	-	-	-	212	44	2	15	-	26	1	-	-	-
Ky.	-	-	-	-	-	196	9	-	-	-	3	-	-	-	-
Tenn.	1	-	-	-	-	-	13	-	7	-	16	-	-	-	-
Ala.	2	-	-	-	-	-	11	-	5	-	7	1	-	-	-
Miss.	1	-	-	-	-	16	11	2	3	-	-	-	-	-	-
W.S. CENTRAL	5	-	1	-	-	62	58	9	63	1	12	11	-	8	-
Ark.	1	-	-	-	-	-	4	-	3	1	1	5	-	-	-
La.	-	-	1	-	-	-	15	-	5	-	4	-	-	-	-
Okla.	2	-	-	-	-	-	5	-	2	-	7	6	-	1	-
Tex.	2	-	-	-	-	62	34	9	53	-	-	-	-	7	-
MOUNTAIN	6	-	3	-	-	1	64	3	37	9	50	35	-	2	-
Mont.	1	-	-	-	-	-	4	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	2	-	3	-	9	8	-	1	-
Wyo.	-	-	-	-	-	1	2	-	1	-	1	-	-	-	-
Colo.	3	-	2	-	-	-	6	1	4	9	20	12	-	-	-
N. Mex.	2	-	-	-	-	-	4	N	N	-	13	10	-	-	-
Ariz.	-	-	1	-	-	-	41	2	20	-	3	-	-	-	-
Utah	-	-	-	-	-	-	3	-	3	-	4	5	-	1	-
Nev.	-	-	-	-	-	-	2	-	6	-	-	-	-	-	-
PACIFIC	61	-	9	-	5	42	120	9	71	11	95	73	1	14	20
Wash.	5	-	-	-	-	7	15	-	6	1	7	13	-	-	-
Oreg.	2	-	-	-	-	-	13	N	N	-	-	5	-	1	-
Calif.	53	-	3	-	-	26	85	9	58	10	83	53	1	8	20
Alaska	-	-	-	-	-	9	4	-	2	-	1	-	-	1	-
Hawaii	1	-	6	-	5	-	3	-	5	-	4	2	-	4	-
Guam	-	U	-	U	-	4	-	U	4	U	-	-	U	-	-
P.R.	-	16	72	-	-	35	5	-	-	-	-	5	-	-	-
V.I.	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-
Amer. Samoa	-	U	1	U	-	-	-	U	-	U	2	-	U	-	-
C.N.M.I.	-	-	-	-	-	-	-	3	8	-	-	1	-	-	-

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

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending April 3, 1993, and March 28, 1992 (13th 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	6,817	8,684	64	3,855	4,542	14	72	22	1,568
NEW ENGLAND	105	190	8	63	57	-	8	2	307
Maine	2	-	-	7	1	-	-	-	-
N.H.	2	12	2	1	-	-	-	-	10
Vt.	-	-	-	-	-	-	-	-	5
Mass.	55	81	5	18	35	-	6	2	98
R.I.	2	12	1	16	-	-	-	-	-
Conn.	44	85	-	21	21	-	2	-	194
MID. ATLANTIC	580	1,229	12	826	1,040	-	8	2	494
Upstate N.Y.	64	68	7	47	131	-	3	-	370
N.Y. City	368	660	-	540	580	-	2	-	-
N.J.	93	183	-	125	166	-	1	2	88
Pa.	55	318	5	114	163	-	2	-	36
E.N. CENTRAL	995	1,188	20	448	457	2	8	-	10
Ohio	295	154	11	66	82	-	2	-	-
Ind.	92	54	1	45	41	1	1	-	-
Ill.	310	502	-	244	221	-	3	-	-
Mich.	190	271	8	76	97	1	2	-	-
Wis.	108	207	-	17	16	-	-	-	10
W.N. CENTRAL	377	323	5	64	102	2	-	-	73
Minn.	14	27	2	-	33	-	-	-	13
Iowa	26	6	2	5	6	-	-	-	10
Mo.	292	242	-	34	37	1	-	-	1
N. Dak.	-	1	-	-	3	-	-	-	17
S. Dak.	-	-	-	6	7	-	-	-	4
Nebr.	-	1	-	5	5	-	-	-	1
Kans.	45	46	1	14	11	1	-	-	27
S. ATLANTIC	2,046	2,472	7	624	890	-	9	4	455
Del.	32	57	-	-	15	-	-	-	38
Md.	105	194	-	98	69	-	2	-	130
D.C.	228	129	-	28	39	-	-	-	4
Va.	157	167	-	127	94	-	1	-	79
W. Va.	9	3	-	22	16	-	-	-	17
N.C.	544	594	3	86	126	-	-	3	13
S.C.	299	315	-	89	87	-	-	-	35
Ga.	332	560	-	174	179	-	1	1	119
Fla.	340	453	4	-	265	-	5	-	20
E.S. CENTRAL	845	1,258	2	274	267	3	1	3	19
Ky.	70	42	1	73	87	-	-	2	3
Tenn.	234	290	1	52	-	2	-	-	-
Ala.	213	617	-	104	103	1	1	-	16
Miss.	328	309	-	45	77	-	-	1	-
W.S. CENTRAL	1,584	1,344	1	330	309	4	1	11	123
Ark.	252	195	-	27	27	3	-	-	2
La.	612	616	-	-	7	-	1	-	-
Okla.	90	71	1	27	30	-	-	11	20
Tex.	630	462	-	276	245	1	-	-	101
MOUNTAIN	61	118	2	109	123	-	3	-	17
Mont.	-	2	-	-	-	-	-	-	2
Idaho	-	1	-	2	7	-	-	-	-
Wyo.	1	-	-	1	-	-	-	-	2
Colo.	20	22	1	8	16	-	2	-	-
N. Mex.	12	16	-	10	14	-	-	-	2
Ariz.	27	41	-	61	46	-	1	-	11
Utah	1	2	1	9	19	-	-	-	-
Nev.	-	34	-	18	21	-	-	-	-
PACIFIC	224	562	7	1,117	1,297	3	34	-	70
Wash.	11	32	-	61	71	1	2	-	-
Oreg.	25	12	-	16	21	-	-	-	-
Calif.	185	514	7	968	1,130	2	30	-	58
Alaska	1	1	-	7	19	-	-	-	12
Hawaii	2	3	-	65	56	-	2	-	-
Guam	-	1	-	11	10	-	-	-	-
P.R.	147	46	-	44	40	-	-	-	16
V.I.	15	16	-	2	1	-	-	-	-
Amer. Samoa	-	-	-	1	-	-	-	-	-
C.N.M.I.	-	2	-	6	8	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending April 3, 1993 (13th Week)

Reporting Area	All Causes, By Age (Years)						P&I[†] Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	707	529	106	47	12	12	90
Boston, Mass.	192	136	31	15	5	4	22
Bridgeport, Conn.	60	37	13	6	1	3	7
Cambridge, Mass.	25	23	2	-	-	-	2
Fall River, Mass.	43	36	3	4	-	-	4
Hartford, Conn.	31	22	8	-	-	1	1
Lowell, Mass.	35	24	7	1	-	3	6
Lynn, Mass.	16	11	4	1	-	-	-
New Bedford, Mass.	32	27	4	-	1	-	1
New Haven, Conn.	45	29	6	8	2	-	4
Providence, R.I.	69	60	7	2	-	-	10
Somerville, Mass.	6	4	2	-	-	-	-
Springfield, Mass.	49	38	5	3	3	-	8
Waterbury, Conn.	41	30	7	4	-	-	7
Worcester, Mass.	63	52	7	3	-	1	18
MID. ATLANTIC	2,503	1,729	424	249	53	48	146
Albany, N.Y.	44	36	3	1	1	3	2
Allentown, Pa.	21	19	2	-	-	-	-
Buffalo, N.Y.	U	U	U	U	U	U	U
Camden, N.J.	26	16	4	3	1	2	-
Elizabeth, N.J.	19	13	4	2	-	-	3
Erie, Pa.§	55	45	9	-	-	1	7
Jersey City, N.J.	44	24	8	9	2	1	3
New York City, N.Y.	1,359	880	258	160	34	27	56
Newark, N.J.	U	U	U	U	U	U	U
Paterson, N.J.	27	14	7	5	1	-	-
Philadelphia, Pa.	398	279	63	42	7	7	23
Pittsburgh, Pa.§	82	66	10	3	3	-	9
Reading, Pa.	18	13	2	2	1	-	3
Rochester, N.Y.	131	108	15	4	2	2	18
Schenectady, N.Y.	43	37	4	1	1	-	2
Scranton, Pa.§	39	31	3	4	-	1	4
Syracuse, N.Y.	112	85	17	8	-	2	12
Trenton, N.J.	39	29	7	2	-	1	2
Utica, N.Y.	18	13	4	1	-	-	-
Yonkers, N.Y.	28	21	4	2	-	1	2
E.N. CENTRAL	2,289	1,468	442	233	97	49	139
Akron, Ohio	40	32	4	3	1	-	-
Canton, Ohio	36	28	6	2	-	-	7
Chicago, Ill.	442	191	94	94	57	6	20
Cincinnati, Ohio	120	81	28	7	2	2	13
Cleveland, Ohio	185	116	41	12	12	4	5
Columbus, Ohio	188	131	37	15	3	2	6
Dayton, Ohio	123	90	22	9	2	-	6
Detroit, Mich.	263	165	46	27	6	19	11
Evansville, Ind.	35	23	8	1	-	3	1
Fort Wayne, Ind.	53	40	10	2	1	-	7
Gary, Ind.	21	10	5	4	1	1	-
Grand Rapids, Mich.	80	58	14	4	2	2	8
Indianapolis, Ind.	200	127	45	23	3	2	24
Madison, Wis.	33	24	6	3	-	-	2
Milwaukee, Wis.	136	96	22	12	2	4	5
Peoria, Ill.	51	37	9	2	1	2	6
Rockford, Ill.	63	47	12	3	-	1	5
South Bend, Ind.	46	36	5	2	3	-	6
Toledo, Ohio	97	82	11	2	1	1	5
Youngstown, Ohio	77	54	17	6	-	-	2
W.N. CENTRAL	797	585	122	47	22	21	69
Des Moines, Iowa	44	34	7	2	1	-	3
Duluth, Minn.	36	26	9	1	-	-	3
Kansas City, Kans.	38	32	4	-	1	1	2
Kansas City, Mo.	135	99	17	9	5	5	6
Lincoln, Nebr.	37	29	6	2	-	-	3
Minneapolis, Minn.	164	124	18	14	3	5	12
Omaha, Nebr.	81	55	20	2	3	1	4
St. Louis, Mo.	141	95	22	11	7	6	30
St. Paul, Minn.	57	46	6	3	-	2	5
Wichita, Kans.	64	45	13	3	2	1	1

Reporting Area	All Causes, By Age (Years)						P&I[†] Total
	All Ages	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,473	969	282	136	54	31	100
Atlanta, Ga.	216	135	43	22	8	8	11
Baltimore, Md.	269	171	51	32	13	2	32
Charlotte, N.C.	113	86	15	9	-	3	12
Jacksonville, Fla.	130	86	30	7	3	4	7
Miami, Fla.	175	103	35	24	11	2	2
Norfolk, Va.	82	44	19	7	7	5	6
Richmond, Va.	97	61	20	8	4	4	6
Savannah, Ga.	56	39	10	5	1	1	5
St. Petersburg, Fla.	86	66	7	9	4	-	3
Tampa, Fla.	223	160	48	10	3	1	16
Washington, D.C.	U	U	U	U	U	U	U
Wilmington, Del.	26	18	4	3	-	1	-
E.S. CENTRAL	757	542	142	49	12	12	61
Birmingham, Ala.	110	87	13	6	1	3	7
Chattanooga, Tenn.	82	65	10	3	1	3	6
Knoxville, Tenn.	88	56	24	7	1	-	13
Lexington, Ky.	35	27	5	-	2	1	5
Memphis, Tenn.	182	135	32	12	3	-	16
Mobile, Ala.	78	56	16	2	2	2	4
Montgomery, Ala.	50	37	9	4	-	-	3
Nashville, Tenn.	132	79	33	15	2	3	7
W.S. CENTRAL	1,392	874	281	148	49	36	88
Austin, Tex.	79	54	16	8	1	-	3
Baton Rouge, La.	29	17	8	3	-	1	1
Corpus Christi, Tex.	U	U	U	U	U	U	U
Dallas, Tex.	194	108	40	26	10	10	4
El Paso, Tex.	95	63	19	7	2	4	12
Ft. Worth, Tex.	107	63	22	10	7	5	6
Houston, Tex.	310	191	63	42	8	6	30
Little Rock, Ark.	78	47	19	7	4	1	5
New Orleans, La.	128	81	25	13	2	4	-
San Antonio, Tex.	192	124	39	16	10	3	9
Shreveport, La.	43	28	8	5	1	1	5
Tulsa, Okla.	137	98	22	11	4	1	13
MOUNTAIN	880	612	165	62	17	24	74
Albuquerque, N.M.	93	65	20	6	1	1	5
Colo. Springs, Colo.	45	32	8	2	1	2	4
Denver, Colo.	124	79	26	12	1	6	15
Las Vegas, Nev.	160	111	43	1	3	2	10
Ogden, Utah	21	17	2	2	-	-	1
Phoenix, Ariz.	177	116	29	20	5	7	17
Pueblo, Colo.	25	21	1	3	-	-	-
Salt Lake City, Utah	91	56	21	8	3	3	6
Tucson, Ariz.	144	115	15	8	3	3	16
PACIFIC	1,998	1,345	327	224	41	52	144
Berkeley, Calif.	39	28	7	2	-	2	1
Fresno, Calif.	59	38	8	4	2	7	5
Glendale, Calif.	38	33	4	1	-	-	5
Honolulu, Hawaii	98	72	13	8	4	1	12
Long Beach, Calif.	80	53	15	9	1	2	8
Los Angeles, Calif.	523	330	90	76	11	9	24
Pasadena, Calif.	22	18	2	1	1	-	1
Portland, Oreg.	142	94	26	12	4	6	6
Sacramento, Calif.	148	93	32	14	4	5	6
San Diego, Calif.	164	115	20	17	4	6	23
San Francisco, Calif.	167	85	44	34	2	2	-
San Jose, Calif.	195	148	24	17	1	5	30
Santa Cruz, Calif.	22	16	4	2	-	-	2
Seattle, Wash.	151	112	14	20	1	4	3
Spokane, Wash.	55	38	7	6	2	2	7
Tacoma, Wash.	95	72	17	1	4	1	11
TOTAL	12,796[¶]	8,653	2,291	1,195	357	285	911

*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.

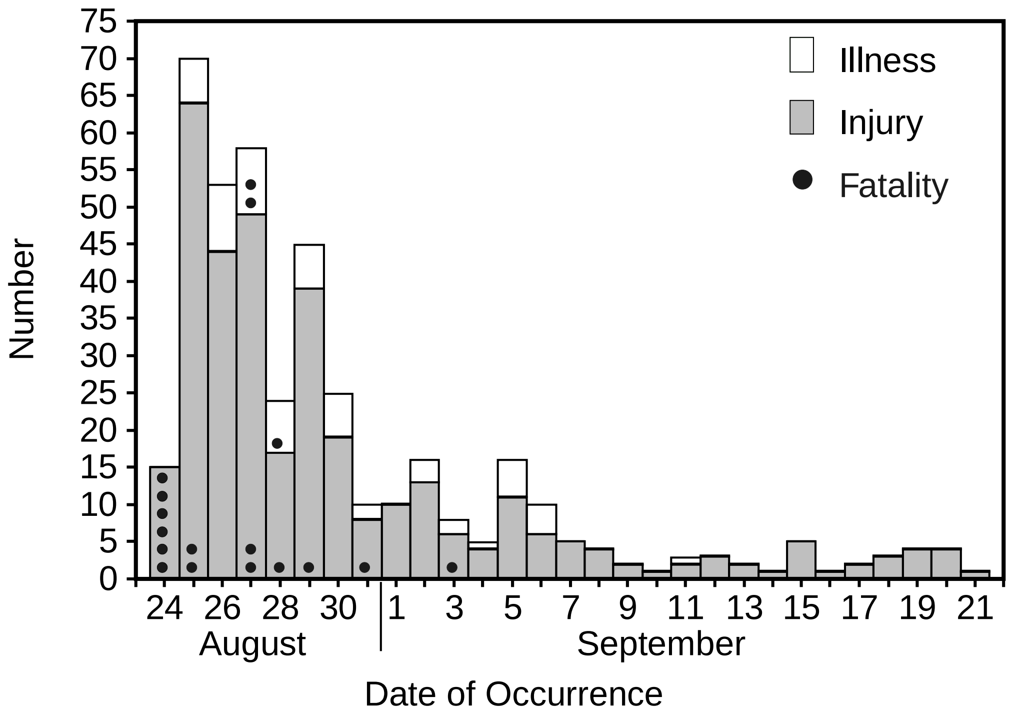
§Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

U: Unavailable.

Hurricane Andrew — Continued

FIGURE 1. Number of injuries, illnesses, and fatalities related to Hurricane Andrew,* by date of occurrence — Louisiana, August 24–September 21, 1992†



* n=406.
† Hurricane Andrew made landfall August 26 at 8:30 a.m.

TABLE 1. Characteristics of Hurricane Andrew-related injuries and illnesses — Louisiana, 1992

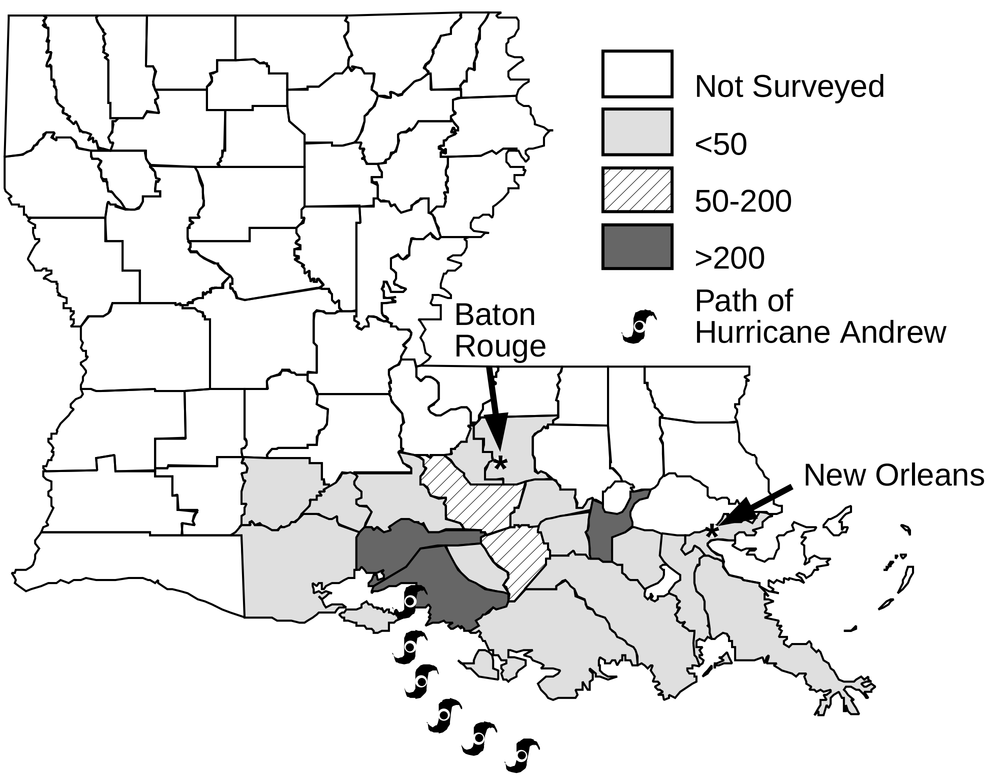
	Nonfatal		Fatal	
Type of injury/illness	**No.**	**(%)**	**No.**	**(%)**
Cut/laceration/puncture wound	184	(41)	0	
Sprain/strain/fracture	49	(11)	0	
Contusion/impact	46	(10)	3	(18)
Insect bite/sting	23	(5)	0	
Rash	23	(5)	0	
Fall	23	(5)	1	(6)
Crush	15	(4)	1	(6)
Burn	10	(2)	0	
Anxiety	8	(2)	0	
Drowning	—		6	(35)
Dog bite	1	<1	0	
Asphyxiation	—		1	(6)
Electrocution	1	<1	2	(12)
Other	62	(14)	3	(18)
Total	**445**	**(100)**	**17**	**(100)**

Hurricane Andrew — Continued

radio announcements before and after Hurricane Andrew made landfall to the dangers that would be present during the preimpact, impact, and postimpact phases (e.g., drownings, crush injuries, and electrocutions, respectively).

Information on natural disaster-related morbidity and mortality is available from many sources, including medical examiners' and coroners' reports, death certificates, the American Red Cross, meteorologic services, police and fire departments, and emergency medical services (*3–5*). However, these sources use different methods and criteria for case selection (e.g., each uses a different definition of disaster-related injury), and no one source collects complete information on deaths and injuries. Similarly, no universally accepted definition exists of a disaster-related death. For example, following Hurricane Hugo in 1989, two coroners in South Carolina reported "heart attacks" that occurred during the hurricane as caused by hurricane-induced stress, but coroners and medical examiners in other regions of the state did not consider any heart attacks hurricane-related, regardless of when they occurred, and did not report them as such (6). The lack of standardized definitions for disaster-related death and injury presents difficulties in enumerating related deaths and injuries following a natural disaster. Furthermore, comparison of death and injury data from different sources is problematic.

FIGURE 2. Rate* of Hurricane Andrew-related injuries and illnesses, by parish — Louisiana, August 24–September 21, 1992



*Per 100,000 population.

Hurricane Andrew — Continued

This report demonstrates the feasibility of collecting emergency surveillance data that can be used to prevent injury and death related to a natural disaster. Better epidemiologic knowledge of the types of injury and illness and causes of death related to hurricanes is essential for the planning and provision of public health responses (e.g., distribution of relief supplies, equipment, and personnel) during such disasters (*7*). To assist efficient data collection and to facilitate decisions made by emergency personnel following disasters, CDC, in collaboration with state health departments, has developed disaster-related injury/illness surveillance questionnaires that can be quickly modified for specific situations. In addition, to enable comparisons of disaster-related injury/illness data from different sources, CDC is standardizing surveillance variables and methods of data collection. Development of robust methods for collecting and analyzing these questionnaires should assist public health professionals in guiding their emergency responses during future disasters.

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Current Trends

Years of Potential Life Lost Before Age 65 — United States, 1990 and 1991

Years of potential life lost (YPLL) is a public health measure that reflects the impact of deaths occurring in years preceding a conventional cut-off year of age, usually 65 years. YPLL is calculated using final mortality data from CDC's National Center for Health Statistics (*1*) for the most recent year available, provisional mortality data (i.e., a 10% sample of deaths) (*2*) for the following year, and population estimates from the U.S. Census. This report summarizes final YPLL data for 1990 and provisional data for 1991.

During 1990, years of potential life lost before age 65 years (YPLL-65) totalled 12,237,379 in the United States (Table 1). Unintentional injuries accounted for the largest proportion of YPLL-65 from all causes (17.5%), followed by malignant neoplasms (15.1%), suicide/homicide (12.2%), diseases of the heart (11.2%), congenital anomalies (5.4%), and human immunodeficiency virus infection including acquired immunodeficiency syndrome (HIV/AIDS) (5.4%).

Years of Potential Life Lost — Continued

From 1989 to 1990, YPLL-65 decreased by less than 1% (Table 1). The largest percentage decreases were for prematurity (9.2%), pneumonia/influenza (4.2%), and unintentional injuries (4.1%); the largest increases were for HIV/AIDS (12.7%) and suicide/homicide (6.5%).

Based on provisional data, unintentional injuries remained the leading cause of YPLL-65 during 1991, accounting for 17.1% of all YPLL-65, followed by malignant neoplasms (15.2%), suicide/homicide (12.7%), and diseases of the heart (11.7%). HIV/AIDS, which accounted for 6.3% of all YPLL-65, replaced congenital anomalies as the fifth leading cause of YPLL-65.

Reported by: Applications Br, Div of Surveillance and Epidemiology, Epidemiology Program Office, CDC.

Editorial Note: Leading causes of death in the United States are ranked by using absolute counts of death for selected causes of death, thus giving each death a weight of 1.0. In comparison, YPLL gives a weight to each death proportionate to its distance from the arbitrarily designated age of 65 years. YPLL-65 emphasizes deaths at early ages in two ways: 1) by not including deaths occurring at ages beyond the cut-off, and 2) by giving greater computational weight to deaths among younger persons. YPLL-65

TABLE 1. Years of potential life lost before age 65* (YPLL-65), by cause of death — United States, 1989 and 1990 (final), and 1991 (provisional)

Cause of death (ICD-9[†] codes)	YPLL-65 for persons dying in 1989	YPLL-65 for persons dying in 1990	% Change from 1989 to 1990	YPLL-65 for persons dying in 1991[§]
All causes (total)	**12,339,045**	**12,237,379**	**–0.8**	**12,276,349**
Unintentional injuries (E800–E949)	2,235,335	2,143,002	**–4.1**	2,102,923
Malignant neoplasms (140–208)	1,832,039	1,846,719	**0.8**	1,867,263
Suicide/homicide (E950–E978)	1,402,524	1,493,672	**6.5**	1,563,507
Diseases of the heart (390–398, 402, 404–429)	1,411,399	1,375,923	**–2.5**	1,382,789
Congenital anomalies (740–759)	660,346	666,684	**1.0**	607,980
Human immunodeficiency virus (HIV) infection (042–044)[¶]	585,992	660,261	**12.7**	776,240
Prematurity (765, 769**)	487,749	442,664	**–9.2**	438,600
Sudden infant death syndrome (798)	363,393	349,397	**–3.9**	333,465
Cerebrovascular disease (430–438)	237,898	240,942	**1.3**	225,374
Chronic liver disease and cirrhosis (571)	233,472	224,355	**–3.9**	206,127
Pneumonia/Influenza (480–487)	184,382	176,618	**–4.2**	168,148
Diabetes mellitus (250)	145,501	145,895	**0.3**	149,322
Chronic obstructive pulmonary disease (490–496)	135,507	132,743	**–2.0**	129,655

*YPLL-65 is calculated as 65 minus the middle age for each age group, times the number of deaths from a specific cause within that age group, added for all age groups to 65.

†*International Classification of Diseases, Ninth Revision.*

§Death rates are from a 10% sample of all deaths and are adjusted for reporting lags.

¶HIV infection including acquired immunodeficiency syndrome. These codes are from addenda to the ICD-9 (*3*).

**Category derived from disorders relating to short gestation, unspecified low birthweight, and respiratory distress syndrome.

Years of Potential Life Lost — Continued

is calculated as 65 minus the middle age for each age group, times the number of deaths from a specific cause within that age group, added for all age groups to 65.

Provisional mortality estimates for selected conditions are based on a 10% sample of death certificates and are adjusted for reporting biases (e.g., provisional reporting of cause of death) (*4*). Because 1991 data are provisional, YPLL estimates based on 1990 final mortality data are not compared with 1991 data.

The causes of death with the largest increases in YPLL-65 from 1989 to 1990 are HIV/AIDS and suicide/homicide. The 12.7% increase in YPLL-65 for HIV/AIDS corresponds to increases in the annual number of deaths from AIDS. Prevention programs for communities and individuals are crucial for reducing behaviors that lead to transmission of HIV. The 6.5% increase in YPLL-65 for suicide/homicide reflects 1.8% and 10.8% increases in YPLL-65 for suicide and homicide, respectively. Several factors may have contributed to these changes, including increases in substance abuse, access to handguns, poverty, urbanization and crowding, and family disruption and disorganization (*5*). For prevention of suicide/homicide, CDC has recommended interventions that can be incorporated in community programs. These include use of school-based curricula based on nonviolent conflict-resolution skills; peer-counseling programs; enforcement or enactment of local drinking and firearms-control regulations; crisis-intervention services; and improved recognition and comprehensive treatment of persons with mental disorders (*6,7*).

The 9.2% decrease in YPLL-65 for prematurity from 1989 to 1990 reflects a 1.2% increase in YPLL-65 for disorders related to short gestation and unspecified low birthweight and a 21.5% decrease in YPLL-65 for respiratory distress syndrome. Recent improvements in medical management of respiratory distress syndrome may have contributed to this trend (*8,9*).

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Adult Blood Lead Epidemiology and Surveillance — United States, Fourth Quarter, 1992

Data from CDC's National Institute for Occupational Safety and Health Adult Blood Lead Epidemiology and Surveillance program are complete for 1992. Efforts to expand the number of states participating in the surveillance system are ongoing as states increase their capacity to monitor blood lead levels in both adults and children.

Reported by: B Harrell, MPA, Div of Epidemiology, CH Woernle, MD, State Epidemiologist, Alabama Dept of Public Health. A Osorio, MD, S Payne, MS, Occupational Health Surveillance and Evaluation Program, California Dept of Health Svcs. J McCammon, MS, Epidemiology Div, Colorado Dept of Health. CJ Dupuy, Connecticut State Dept of Health Svcs. M Lehnherr, Occupational Disease Registry; H Howe, PhD, Div of Epidemiologic Studies, Illinois Dept of Public Health. K Choquette, MS, R Currier, DVM, State Epidemiologist, Iowa Dept of Public Health. E Coe, MPH, Health Registries Div, Maryland Dept of the Environment. R Rabin, MSPH, Div of Occupational Hygiene, Massachusetts Dept of Labor and Industries. P Dunbar, MPH, Bur of Child and Family Svcs, Michigan Dept of Public Health. T Ferrara, MD, Occupational Health Program, Bur of Risk Assessment, Div of Public Health Svcs, New Hampshire State Dept of Health and Human Svcs. B Gerwel, MD, Occupational Disease Prevention Program, New Jersey Dept of Health. R Stone, PhD, New York State Dept of Health. M Barnett, MS, State Health Div, Oregon Dept of Human Resources. J Gosten, MS, Occupational Health Program, Div of Environmental Health, Pennsylvania Dept of Health. R Marino, MD, Div of Health Hazard Evaluations, South Carolina Dept of Health and Environmental Control. T Willis, DM Perrotta, PhD, Environmental Epidemiologist, Texas Dept of Health. D Beaudoin, MD, Bur of Epidemiology, Utah Dept of Health. L Hanrahan, MS, Div of Health, Wisconsin Dept of Health and Social Svcs. Div of Surveillance, Hazard Evaluations, and Field Studies, National Institute for Occupational Safety and Health, CDC.

TABLE 1. Number of reports of elevated blood lead levels (BLLs) in adults — 18 states,* fourth quarter, 1992

Reported BLL (µg/dL)	Fourth quarter, 1992†	Cumulative, 1992	Cumulative, 1991§
25–39 µg/dL	2,939	15,279	NA¶
40–49 µg/dL	703	4,288	NA
50–59 µg/dL	205	1,089	NA
≥60 µg/dL	104	585	NA
Total	**3,951**	**21,241**	**18,879**

* Alabama, California, Colorado, Connecticut, Illinois, Iowa, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Oregon, Pennsylvania, South Carolina, Texas, Utah, and Wisconsin.

† Quarterly totals do not include data from Pennsylvania, from which data are available only on an annual cumulative basis.

§ Cumulative data for 1991 reported from 13 states.

¶ Data stratified by BLL not available for 1991.

Notice to Readers

National Preschool Immunization Week

The first National Preschool Immunization Week (NPIW), sponsored by CDC and members of the Immunization Education and Action Committee of the Healthy Mothers, Healthy Babies Coalition (including the Children's Action Network and the American Academy of Pediatrics); public health departments; and other private and public immunization partners, is April 24–30, 1993. This year's theme is "Hands Across the Nation for Preschool Immunization." Events will encourage cooperation between health-care providers and parents to ensure that children are enrolled with a private physician, public clinic, or other health-care facility that will screen and track their vaccination needs to ensure they receive all recommended vaccinations by their second birthday. Local programs are encouraged to participate in NPIW by tailoring activities to fit their communities' needs.

NPIW will be held the last week of April each year. It is intended to stimulate activities at national, state, and local levels that complement locally developed Immunization Action Plans (IAPs) and help achieve permanent improvements in the delivery of vaccines to infants and toddlers. In addition, NPIW is an annual opportunity to assess progress, plan for the future, and recognize major accomplishments toward achieving the national health objective for the year 2000 that at least 90% of children are fully vaccinated by their second birthday (objective 20.11) (*1*).

Additional information and a listing of some state and local events planned for the 1993 NPIW are available from state immunization programs or from CDC's Division of Immunization, National Center for Prevention Services, 1600 Clifton Road, NE, Mailstop E-05, Atlanta, GA 30333; telephone (404) 639-1867.

Reference

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Errata: Vol. 42, No. 12

In the article, "Methemoglobinemia in an Infant—Wisconsin, 1992," reference 2 (page 219) was cited incorrectly. The correct citation is: Litovitz TL, Holn KC, Clancy C, Schmitz BF, Clark LR, Oderda GM. 1992 Annual report of the American Association of Poison Control Centers Toxic Exposure Surveillance System. Am J Emerg Med 1993;11 (in press).

In the article "Cigarette Smoking Among Adults—United States, 1991," on page 232, in the first paragraph of the editorial note, the last sentence, the amount spent on domestic cigarette advertising and promotional expenditures should be $3.9 *billion*.

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