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Epidemiologic Notes and Reports

Human Rabies — Texas and California, 1993

During November 1993, two persons, a resident of Texas and a visitor to California, died from rabies. This report summarizes epidemiologic and clinical information about these cases.

Texas

On November 4, an 82-year-old male farmer residing in east Texas was admitted to a nearby hospital in Arkansas because of ataxia and dysphagia for 1 day. Family members reported that he had become forgetful and confused during the preceding 4–5 days. On November 3, a physician had prescribed ampicillin to treat a cough.

On admission, the patient could follow some commands but was hallucinating and uncooperative. Abnormal findings on physical examination included mild elevation of temperature (100.1 F [37.8 C]), increased muscle tone in his extremities, tremors, and decreased reflexes. His total white blood cell count was within normal limits (8400 cells/mm^3), but a differential count showed 90% segmented neutrophils. Examination of cerebrospinal fluid (CSF) revealed 1 lymphocyte/mm^3, a glucose level of 60 mg/dL, and a protein level of 42 mg/dL; a computerized tomographic (CT) scan of his brain revealed diffuse atrophy. His admitting diagnosis was cerebrovascular accident.

On November 5, the patient was intubated and pharmacologically paralyzed because of paroxysmal muscle activity. He required inotropic agents to support blood pressure and a heating blanket to maintain temperature. Because of his clinical manifestations, tetanus and rabies were considered as causes of illness; however, no history of travel or animal bite could be elicited from the patient or his family.

An electroencephalogram performed on November 9 demonstrated diffuse slowing with associated burst suppression consistent with a metabolic or toxic encephalopathy. After deep tendon and brain stem reflexes could not be elicited nor response to painful stimuli demonstrated, ventilatory support was withdrawn. The patient died, and a limited autopsy was performed.

Brain specimens were sent to the Arkansas State Health Department Laboratory and were positive for rabies by fluorescent antibody testing. Monoclonal antibody testing at the Texas Department of Health (TDH) and nucleotide sequence analysis of

Human Rabies — Continued

viral ribonucleic acid at CDC implicated a bat strain of rabies virus. Virus isolated from the patient was genetically related to the strain of rabies associated with the silver-haired bat (*Lasionycteris noctivagans*), a species found in all parts of the United States except the extreme southern coastal areas.

All family members were again questioned about the exposure history of the patient. The only known suspected animal exposure was to a cow that had died of an unknown disease 3 months before onset of the patient's illness. Although bats were not detected during site inspection of the patient's residence, the attic space and the living areas of the home had openings accessible from the outside.

TDH provided information to 27 family members about rabies transmission and individual counseling to determine exposure histories. Persons who had had mucous membrane or nonintact skin contact with the patient's saliva or respiratory secretions (13) and those who specifically requested treatment (two) received postexposure antirabies prophylaxis. One person requested treatment because he had assisted the decedent in providing care for the dying cow. The two morticians involved in the case also were treated. Hospital personnel in Arkansas interviewed 110 employees who had cared for the patient, and 55 received prophylaxis.

California

On November 10, a 69-year-old citizen of Mexico who had been visiting relatives in California since September was evaluated at an urgent-care center for a 3-day history of increasing pain in his left jaw, chest, and shoulder; he also complained of sore throat, anxiety, insomnia, nausea, and vomiting and that he was unable to eat or drink. He related the onset to a spider bite he believed he received on his left jaw. He was transferred to a community hospital and treated for chest pain, but evaluation ruled out acute cardiac disease. The patient rejected oral fluids and continued to complain of the spider bite, although no marks were seen. He was referred to the mental health crisis unit of a second hospital, where he was noted to be anxious and dyspneic and to have impaired memory. He was diagnosed with anxiety disorder–unspecified, treated with intramuscular lorazepam, and discharged. On November 11, he returned to the second hospital in acute distress; findings on examination included fever (103 F [39.4 C]), elevated blood pressure, hypersalivation, uncontrollable spitting, and staggering gait. His leukocyte count was 16,100/mm^3 (normal: 5000–10,000/mm^3). He became increasingly agitated and was admitted to the intensive-care unit.

Two nurses, trained in Republic of the Philippines (where dog rabies is endemic), recognized signs consistent with manifestations of human rabies and elicited from the family a history of a dog bite to the patient in Mexico in late May or early June 1993. He had been bitten on the left side of his neck by a neighbor's puppy and had cleaned the wound with soap and water but had not received rabies prophylaxis. The patient rapidly became unresponsive and required respiratory support. A CSF sample and CT scan of the head were normal.

A nuchal skin biopsy obtained on November 12 and tested at CDC on November 16 was positive for rabies antigen by direct fluorescent antibody staining. Culture of saliva samples obtained November 12 yielded a strain of rabies virus genetically related to the strain associated with dog rabies endemic in Mexico (*1*). Corneal impressions obtained daily from November 12 through November 16 were inconclusive for rabies antigen at the California Department of Health Services Virus and Rickettsial Disease

Human Rabies — Continued

Laboratory. Serum specimens obtained daily from November 12 through November 16 were negative for rabies at both laboratories. The patient became totally unresponsive and died from respiratory failure on November 21. An autopsy was not performed.

Postexposure prophylaxis was provided for 20 health-care workers who had mucous membrane or nonintact skin contact with the patient's saliva or respiratory secretions or who had otherwise requested treatment and for nine family members. Health authorities in Mexico were notified, and they administered postexposure prophylaxis to a child who had been bitten by the same dog, three other children, and the dog's owner. The dog had been taken to another neighborhood and abandoned because it had bitten both humans and other animals. The dog's mother had since had another litter but died later of unknown causes; none of the dog's littermates nor the subsequent litter could be located. Health authorities in Mexico identified a 10-block area in which all owned dogs were to be vaccinated and stray animals were to be destroyed.

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Editorial Note: From 1980 through 1993, 18 human rabies cases were diagnosed in the United States. Three human rabies cases were diagnosed in 1993, including the two described in this report (*2*); the last reported cases from these states occurred in August 1991 (Texas and Arkansas) and in April 1992 (California).

The same strain of rabies virus infecting the patient in Texas had been identified by genetic analysis in previous rabies cases (*2,3*). This report represents the second recent bat-associated rabies case reported from Texas (*4*). The case of the patient in Texas is typical: despite laboratory confirmation of a bat rabies virus, histories of exposure to bats are usually not elicited; since 1980, such exposure has not been documented in four of the seven reported bat-associated human rabies cases in the United States. Rabies is diagnosed in approximately 200 cows each year in the United States (184 in 1992) (*5*); however, no cases of cow-to-human transmission have been documented since national rabies surveillance began in 1946 (*6,7*). Therefore, it is possible, but unlikely, that the suspected cow could have been infected with a bat strain of rabies and transmitted infection to the patient.

The history for the patient in California is similar to other recent human rabies cases in that state, all of which are believed to have been acquired in other countries where dog rabies is endemic. The last indigenous case in a human in California occurred in 1969 as the result of a bobcat bite; since then, seven imported cases have been reported (*6,7*).

The rabies strains identified in the two cases in this report are consistent with the established epidemiologic pattern observed in the United States since the decline of endemic dog rabies in the 1950s. Since 1980, bat-associated rabies virus has been isolated from seven of the nine patients known to have acquired rabies in the United

Human Rabies — Continued

States, and dog-associated strains were isolated from all eight patients with imported rabies.

Because of the risk for rabies exposure in countries where dog rabies remains endemic, travelers to these countries should avoid contact with dogs and other animals; preexposure prophylaxis for rabies is recommended for travelers planning stays of at least 30 days in such countries (*8*). In the United States, dog vaccination programs and control of stray animal populations have eliminated endemic dog rabies from all areas except the Texas-Mexico border. Reservoirs of rabies persist in some wild animals, including raccoons, skunks, foxes, and bats; in addition, reported cases in wildlife are increasing (*5*). However, prompt treatment of recognized exposures to these animals has reduced human rabies in the United States to a rare occurrence (*8*). The association of the majority of recent indigenous cases with bats probably reflects the difficulty of recognizing a bat exposure, as underscored by the case in this report. Although many of these exposures may not be preventable, the risk for exposure can be reduced by excluding bats from houses and peridomestic structures and settings (*9*).

The risk for transmission of rabies from a patient to family members or health-care workers is extremely low (*10*); human-to-human transmission has been documented only in corneal transplant cases. However, high levels of concern about transmission often make it difficult to limit the number of postexposure treatments administered.

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Epidemiologic Notes and Reports

Imported Dengue — United States, 1992

Dengue is a mosquito-transmitted acute disease caused by any of four virus serotypes (DEN-1, DEN-2, DEN-3, and DEN-4) and characterized by the sudden onset of fever, headache, myalgia, rash, nausea, and vomiting. The disease is endemic in most tropical areas of the world and can occur in U.S. residents returning from international travel. Serum samples from 68 persons with suspected imported dengue with onset in 1992 (*1*) were submitted to CDC from 23 states (Table 1). Of these, 17 (25%) cases (from 10 states) were serologically or virologically diagnosed as dengue. This report summarizes information about these 17 cases.

Nine of the 17 persons with laboratory-diagnosed dengue were females. Age was reported for 15 and ranged from 9–54 years (median: 34 years). Dengue serotype was identified by virus isolation for only one of the 17 cases as DEN-1. Travel histories were available for 14 persons with laboratory-diagnosed dengue (Table 1); infections were acquired in Asia (seven cases), the Caribbean Islands (five cases), Honduras (one), and Colombia (one).

TABLE 1. Suspected and laboratory-diagnosed cases of imported dengue, by state — United States, 1992

State	Cases		Travel history, if known, of persons with laboratory-diagnosed dengue (serotype, if known)
	Suspected	Laboratory-diagnosed	
Alaska	1	0	
Arizona	1	0	
California	2	2	1 Thailand
Colorado	1	0	
Florida	1	0	
Georgia	6	1	
Hawaii	1	0	
Iowa	2	0	
Maine	1	1	Philippines
Massachusetts	11	4	1 Puerto Rico; 1 India, Nepal, Thailand; 1 Thailand; 1 St. Bartholomew
Michigan	1	0	
Minnesota	3	1	Thailand (DEN-1)
Montana	1	0	
New Jersey	3	1	Honduras
New York	11	3	2 Puerto Rico; 1 Jamaica
Ohio	4	0	
Oregon	2	0	
Pennsylvania	1	0	
Tennessee	1	0	
Vermont	1	1	
Virginia	1	0	
Washington	8	2	1 Thailand; 1 Colombia
Wisconsin	4	1	Philippines
Total	**68**	**17**	

Dengue — Continued

The most commonly reported symptoms were consistent with classic dengue fever (e.g., fever, headache, myalgia, and rash). At least two persons required hospitalization; four patients developed a petechial rash; five had low white blood cell counts (1100–2500/mm^3 [normal: 3200–9800/mm^3]); five had low platelet counts (42,000–77,000/mm^3 [normal: 150,000–450,000/mm^3]); four developed elevated liver function test results, and one patient showed hemoconcentration (hematocrit: 51%).

Reported by: State and territorial health depts. Dengue Br, Div of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: Although dengue fever is not endemic in the United States, U.S. residents who become infected during travel to tropical areas may have onsets of illness at home following an incubation period of 7–10 days (*2*). Most persons infected with dengue virus experience mild illness; however, infection in some persons may result in a severe form of the disease—dengue hemorrhagic fever (DHF)—characterized by fever, low platelet count (≤100,000/mm^3), hemorrhagic manifestations, and a leaky capillary syndrome evidenced by hemoconcentration, hypoalbuminemia, or pleural or abdominal effusions (*3*).

The incidence of DHF is increasing in the Americas: since 1984, dengue epidemics with associated cases of DHF have occurred in Aruba, Brazil, Colombia, El Salvador, French Guiana, Honduras, Mexico, Nicaragua, Puerto Rico, St. Lucia, Suriname, and Venezuela. In addition, dengue is endemic in many islands in the Caribbean, Mexico, and most countries in Central and South America. In the Americas, dengue is transmitted by the *Aedes aegypti* mosquito. Although nearly eradicated from the region in the 1960s, this species is now present in most tropical countries of the region and is present year-round in the southernmost areas of Texas and Florida. Endemic transmission of dengue has not occurred in the United States since 1986 (south Texas); however, introduction of the virus by persons who have acquired infections in other countries could result in local transmission.

The 68 cases referred for serologic confirmation in 1992 represent the lowest number of reported cases since 1984 (63 cases) and a 17% decrease from 1991 (82 cases reported). However, they do not include cases of dengue that may have been reported to state health departments without accompanying specimens for testing.

The prevention of dengue in tourists and other persons in tropical locations relies on avoidance of exposure to mosquitoes. The *Aedes* species that transmit dengue may bite at any time during the day, although the peak activity occurs during the early morning and late afternoon. The use of mosquito repellent and protective clothing at all times is recommended. *Ae. aegypti* usually is present in peridomestic settings and is found most often in dark areas such as closets, bathrooms, behind curtains, and under beds. The risk for exposure may be lower for tourists in some settings, including beaches, hotels with well-kept grounds, and heavily forested areas and jungles.

Physicians should consider dengue in the differential diagnosis for all patients who have compatible manifestations and a history of travel to tropical areas. Because of the anticoagulant properties of acetylsalicylic acid (i.e., aspirin), acetaminophen products are recommended for management of fever. Acute and convalescent (30 or fewer days after onset of symptoms) serum samples should be obtained for viral isolation or serodiagnosis and sent for confirmation through the state health department laboratory to CDC's Dengue Branch, Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, 2 Calle Casia, San Juan, PR 00921-3200; telephone

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(809) 766-5181; fax (809) 766-6596. Serum specimens should be accompanied by a summary of clinical and epidemiologic information, including a detailed travel history with dates and location of travel and dates of onset of illness and blood collection.

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Emerging Infectious Diseases

Newly Identified Hantavirus — Florida, 1994

On October 22, 1993, a previously healthy 33-year-old resident of Dade County, Florida, was hospitalized for an illness associated with hypotension, bilateral pulmonary infiltrates, rhabdomyolysis, thrombocytopenia, and an elevated serum creatinine level; onset of severe manifestations followed a 4-day febrile prodrome. His azotemia rapidly resolved, but he required prolonged ventilatory and circulatory support before discharge.

Routine bacterial cultures were negative. A serum sample collected 11 days after onset of illness contained immunoglobulin G (IgG) antibody when tested with Muerto Canyon virus (MCV) antigen, but no antibody could be detected by immunoglobulin M (IgM) capture enzyme-linked immunosorbent assay (ELISA); moreover, the IgG titer was unchanged when a serum sample obtained 6 weeks later was tested at CDC. The patient had not traveled outside of Dade County within 6 months of onset of illness, but previously had lived in a state where cases of hantavirus pulmonary syndrome (HPS) and MCV-infected *Peromyscus maniculatus* have been confirmed (*1*).

The state, district, and county health departments and CDC initiated an investigation to fully characterize the illness and the prevalence of hantavirus seropositivity in the local rodent population. Preliminary serologic findings indicated the presence of hantavirus antibody in 12 (13%) of 90 *Sigmodon hispidus* (cotton rat) trapped in Dade County as part of the investigation. Hantavirus sequences were amplified by polymerase chain reaction (PCR) from lung tissues of three cotton rats. Nucleotide sequence analysis of amplified viral genetic material indicates that this is a previously unrecognized hantavirus most closely related to but distinct from both MCV (*2,3*) and the hantavirus identified in Louisiana (*4*).

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Editorial Note: The findings in this report indicate that evidence of infection with a newly recognized strain of hantavirus is present in rodents in Dade County. Although the prodrome and clinical illness in the patient in Dade County resembled HPS, the laboratory findings were not diagnostic of an acute hantavirus infection. Molecular

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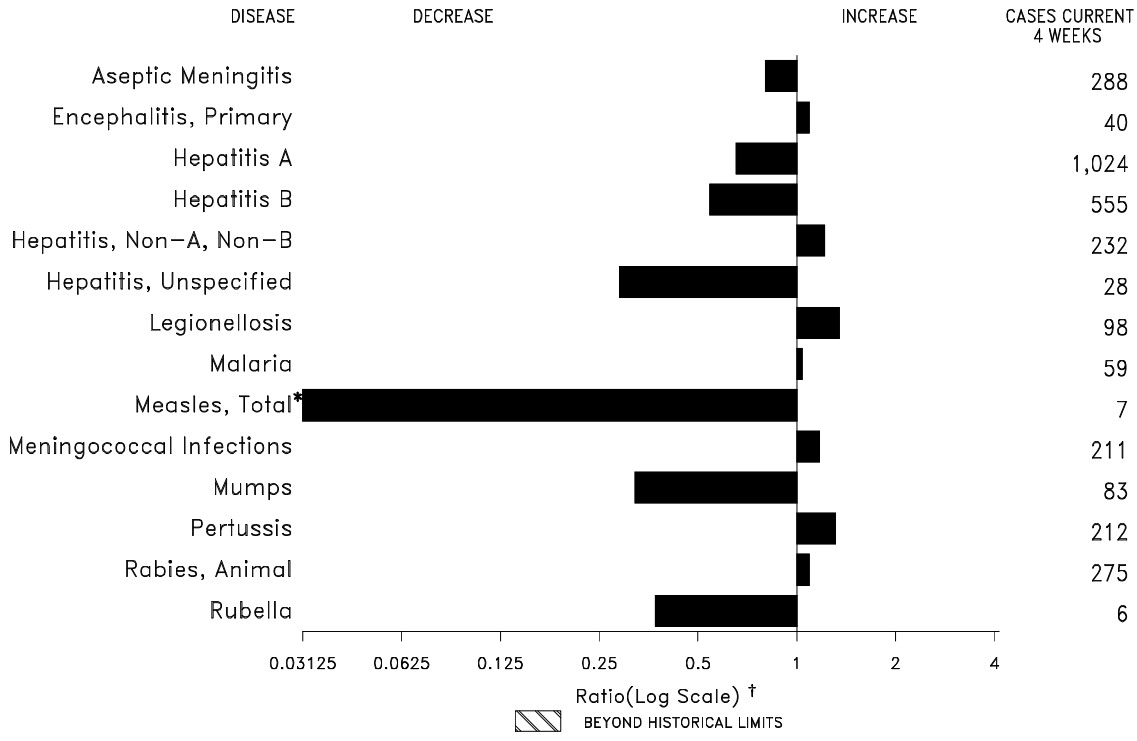
FIGURE I. Notifiable disease reports, comparison of 4-week totals ending February 12, 1994, with historical data — United States



*The large apparent decrease in reported cases of measles (total) reflects dramatic fluctuations in the historical baseline. (Ratio (log scale) for week six is 0.02154).

† 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 February 12, 1994 (6th Week)

	Cum. 1994		Cum. 1994
AIDS*	6,528	Measles: imported	4
Anthrax	-	indigenous	5
Botulism: Foodborne	6	Plague	-
Infant	2	Poliomyelitis, Paralytic§	-
Other	2	Psittacosis	2
Brucellosis	25	Rabies, human	-
Cholera	-	Syphilis, primary & secondary	1,860
Congenital rubella syndrome	1	Syphilis, congenital, age < 1 year	-
Diphtheria	-	Tetanus	3
Encephalitis, post-infectious	11	Toxic shock syndrome	23
Gonorrhea	35,189	Trichinosis	10
Haemophilus influenzae (invasive disease)†	122	Tuberculosis	1,410
Hansen Disease	12	Tularemia	-
Leptospirosis	5	Typhoid fever	23
Lyme Disease	240	Typhus fever, tickborne (RMSF)	8

*Updated monthly; last update January 25, 1994.
†Of 115 cases of known age, 37 (32%) were reported among children less than 5 years of age.
§No cases of suspected poliomyelitis have been reported in 1994; 3 cases of suspected poliomyelitis have been reported in 1993; 4 of the 5 suspected cases with onset in 1992 were confirmed; the confirmed cases were vaccine associated.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending February 12, 1994, and February 13, 1993 (6th Week)

Reporting Area	AIDS*	Aseptic Meningitis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionellosis	Lyme Disease
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1993	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994
UNITED STATES	6,528	473	60	11	35,189	46,387	1,709	884	451	40	150	240
NEW ENGLAND	188	30	4	-	957	916	29	36	15	8	10	25
Maine	-	4	1	-	5	8	1	-	-	-	-	-
N.H.	10	-	-	-	-	10	2	1	3	-	-	2
Vt.	2	3	-	-	3	7	-	-	-	-	-	-
Mass.	79	9	2	-	362	410	15	33	6	8	9	18
R.I.	42	14	1	-	46	52	8	2	6	-	1	5
Conn.	55	-	-	-	541	429	3	-	-	-	-	-
MID. ATLANTIC	2,489	32	3	3	1,871	5,054	57	73	51	2	15	138
Upstate N.Y.	151	10	1	-	497	519	19	26	20	-	3	36
N.Y. City	1,874	-	-	-	-	2,262	-	-	-	-	-	-
N.J.	284	-	-	-	-	616	14	23	23	-	3	24
Pa.	180	22	2	3	1,374	1,657	24	24	8	2	9	78
E.N. CENTRAL	441	97	20	5	7,606	9,176	159	102	35	1	47	5
Ohio	109	30	6	-	3,146	2,431	67	22	1	-	26	5
Ind.	40	33	-	-	962	892	43	24	1	-	9	-
Ill.	256	4	3	-	1,355	3,231	9	1	-	-	1	-
Mich.	24	30	11	5	2,052	1,829	32	50	33	1	10	-
Wis.	12	-	-	-	91	793	8	5	-	-	1	-
W.N. CENTRAL	71	31	3	1	1,920	2,451	66	37	43	1	21	3
Minn.	18	-	1	-	466	333	6	3	1	-	-	1
Iowa	5	13	-	-	146	205	4	2	-	-	9	1
Mo.	8	8	-	-	958	1,312	35	28	42	1	5	-
N. Dak.	-	-	1	-	-	11	-	-	-	-	-	-
S. Dak.	3	-	-	-	9	20	-	-	-	-	-	-
Nebr.	5	1	1	1	-	129	17	1	-	-	6	-
Kans.	32	9	-	-	341	441	4	3	-	-	1	1
S. ATLANTIC	1,180	112	9	-	12,277	12,017	115	223	78	5	25	56
Del.	2	-	-	-	189	160	1	6	19	-	-	24
Md.	45	15	2	-	2,125	2,015	24	29	9	1	6	6
D.C.	40	3	-	-	1,020	662	4	8	-	-	-	-
Va.	48	13	5	-	1,829	760	8	9	2	-	2	6
W. Va.	4	3	-	-	69	83	1	3	1	-	1	1
N.C.	82	18	2	-	3,110	2,465	10	50	10	-	2	10
S.C.	25	4	-	-	1,440	1,285	6	3	-	-	1	-
Ga.	252	4	-	-	-	1,655	14	77	20	-	6	9
Fla.	682	52	-	-	2,495	2,932	47	38	17	4	7	-
E.S. CENTRAL	99	38	3	1	4,470	4,213	46	98	102	-	11	2
Ky.	22	22	2	1	514	564	29	3	2	-	1	1
Tenn.	42	3	1	-	1,048	885	6	83	100	-	6	-
Ala.	22	11	-	-	1,733	1,621	9	12	-	-	2	1
Miss.	13	2	-	-	1,175	1,143	2	-	-	-	2	-
W.S. CENTRAL	754	17	2	-	2,493	6,640	156	77	40	6	1	-
Ark.	10	2	-	-	835	1,204	6	2	-	-	-	-
La.	83	1	-	-	1,569	1,333	7	6	3	-	-	-
Okla.	13	-	-	-	89	314	30	36	36	-	1	-
Tex.	648	14	2	-	-	3,789	113	33	1	6	-	-
MOUNTAIN	75	12	2	-	938	1,325	352	49	41	3	12	5
Mont.	2	-	-	-	20	10	7	2	-	-	6	-
Idaho	1	-	-	-	8	13	33	5	15	1	-	1
Wyo.	-	-	-	-	12	6	2	3	8	-	-	-
Colo.	27	5	-	-	346	533	12	1	4	1	1	-
N. Mex.	13	1	-	-	127	111	115	23	4	1	1	4
Ariz.	21	5	-	-	173	390	140	7	4	-	1	-
Utah	-	1	-	-	36	11	25	3	3	-	-	-
Nev.	11	-	2	-	216	251	18	5	3	-	3	-
PACIFIC	1,231	104	14	1	2,657	4,595	729	189	46	14	8	6
Wash.	47	-	-	-	385	497	55	11	10	-	2	-
Oreg.	53	-	-	-	169	174	61	10	1	1	-	-
Calif.	1,108	86	13	-	1,961	3,835	580	159	32	13	6	6
Alaska	3	1	1	-	59	46	25	1	-	-	-	-
Hawaii	20	17	-	1	83	43	8	8	3	-	-	-
Guam	-	-	-	-	-	14	-	-	-	-	-	-
P.R.	209	1	-	-	57	53	-	12	1	2	-	-
V.I.	5	-	-	-	3	13	-	1	-	-	-	-
Amer. Samoa	-	-	-	-	4	4	2	-	-	-	-	-
C.N.M.I.	1	-	-	-	9	7	-	-	-	-	-	-

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

*Updated monthly; last update January 25, 1994.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending February 12, 1994, and February 13, 1993 (6th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1994	1994	Cum. 1994	1994	Cum. 1994	Cum. 1993	Cum. 1994	1994	Cum. 1994	1994	Cum. 1994	Cum. 1993	1994	Cum. 1994	Cum. 1993
UNITED STATES	81	1	5	2	4	37	365	17	111	40	345	340	3	11	17
NEW ENGLAND	5	-	-	-	-	24	24	-	4	3	16	94	-	5	1
Maine	1	-	-	-	-	-	3	-	3	-	2	3	-	-	1
N.H.	-	-	-	-	-	-	1	-	1	1	4	38	-	-	-
Vt.	-	-	-	-	-	14	-	-	-	2	7	18	-	-	-
Mass.	1	-	-	-	-	3	13	-	-	-	1	32	-	5	-
R.I.	3	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Conn.	-	-	-	-	-	7	7	-	-	-	2	2	-	-	-
MID. ATLANTIC	16	1	1	1	1	3	25	4	10	9	72	60	-	1	2
Upstate N.Y.	8	-	-	-	-	-	5	1	1	4	16	16	-	1	-
N.Y. City	-	1	1	-	-	1	-	-	-	2	2	-	-	-	-
N.J.	6	-	-	-	-	2	9	-	-	-	-	21	-	-	2
Pa.	2	-	-	1†	1	-	11	3	9	3	54	23	-	-	-
E.N. CENTRAL	6	-	-	-	-	-	62	3	23	6	56	78	-	-	1
Ohio	1	-	-	-	-	-	16	1	7	2	35	25	-	-	-
Ind.	2	-	-	-	-	-	11	1	2	3	5	3	-	-	-
Ill.	-	-	-	-	-	-	19	-	6	-	4	10	-	-	-
Mich.	3	-	-	-	-	-	9	1	8	1	9	5	-	-	-
Wis.	-	-	-	-	-	-	7	-	-	-	3	35	-	-	1
W.N. CENTRAL	2	-	-	-	-	-	21	-	4	-	8	16	-	-	1
Minn.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Iowa	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-
Mo.	1	-	-	-	-	-	11	-	3	-	3	8	-	-	1
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
S. Dak.	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-
Nebr.	-	-	-	-	-	-	1	-	-	-	-	4	-	-	-
Kans.	-	-	-	-	-	-	6	-	-	-	5	2	-	-	-
S. ATLANTIC	24	-	2	1	1	4	69	4	30	5	69	12	-	1	2
Del.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Md.	4	-	-	-	-	1	5	-	4	4	20	2	-	-	-
D.C.	4	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Va.	5	-	1	-	-	1	9	1	3	-	8	1	-	-	-
W. Va.	-	-	-	-	-	-	5	1	2	-	1	1	-	-	-
N.C.	1	-	-	-	-	-	9	2	16	-	26	-	-	-	-
S.C.	1	-	-	-	-	-	2	-	3	-	5	2	-	-	-
Ga.	3	-	-	-	-	-	11	-	-	1	5	4	-	-	-
Fla.	6	-	1	1†	1	2	27	-	2	-	4	2	-	1	1
E.S. CENTRAL	-	-	-	-	-	-	40	-	1	-	16	9	-	-	-
Ky.	-	-	-	-	-	-	9	-	-	-	1	4	-	-	-
Tenn.	-	-	-	-	-	-	9	-	-	-	12	1	-	-	-
Ala.	-	-	-	-	-	-	16	-	-	-	3	3	-	-	-
Miss.	-	-	-	-	-	-	6	-	1	-	-	1	-	-	-
W.S. CENTRAL	-	-	-	-	1	1	36	3	20	4	9	7	-	-	-
Ark.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
La.	-	-	-	-	-	1	1	-	1	-	1	-	-	-	-
Okla.	-	-	-	-	-	-	6	-	5	1	5	7	-	-	-
Tex.	-	-	-	-	1	-	28	3	14	3	3	-	-	-	-
MOUNTAIN	1	-	1	-	-	2	22	-	2	4	9	11	-	-	4
Mont.	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
Idaho	-	-	1	-	-	-	2	-	1	2	2	-	-	-	1
Wyo.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Colo.	-	-	-	-	-	2	1	-	-	-	1	-	-	-	-
N. Mex.	-	-	-	-	-	-	3	N	N	1	2	8	-	-	-
Ariz.	-	-	-	-	-	-	9	-	-	1	4	2	-	-	-
Utah	1	-	-	-	-	-	3	-	-	-	-	-	-	-	2
Nev.	-	-	-	-	-	-	2	-	1	-	-	-	-	-	1
PACIFIC	27	-	1	-	1	3	66	3	17	9	90	53	3	4	6
Wash.	1	-	-	-	-	-	5	-	1	1	8	2	-	-	-
Oreg.	1	-	-	-	-	-	6	N	N	2	4	-	-	-	1
Calif.	21	-	1	-	1	1	53	3	14	6	73	47	3	4	3
Alaska	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1
Hawaii	4	-	-	-	-	2	2	-	-	-	5	4	-	-	1
Guam	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
P.R.	-	-	-	-	-	47	1	-	-	-	-	-	-	-	-
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
C.N.M.I.	1	7	19	-	-	-	-	-	-	-	-	-	-	-	-

*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 February 12, 1994, and February 13, 1993 (6th Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic-Shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1994	Cum. 1993	Cum. 1994	Cum. 1994	Cum. 1993	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994
UNITED STATES	1,860	3,409	23	1,410	1,453	-	23	8	416
NEW ENGLAND	23	63	1	25	15	-	4	-	141
Maine	-	-	-	-	3	-	-	-	-
N.H.	-	5	-	-	-	-	-	-	15
Vt.	-	-	-	-	-	-	-	-	10
Mass.	5	35	1	7	1	-	2	-	62
R.I.	3	1	-	2	-	-	-	-	-
Conn.	15	22	-	16	11	-	2	-	54
MID. ATLANTIC	137	266	4	136	253	-	1	-	51
Upstate N.Y.	12	26	3	-	33	-	-	-	-
N.Y. City	98	194	-	89	157	-	-	-	-
N.J.	-	39	-	27	28	-	1	-	33
Pa.	27	7	1	20	35	-	-	-	18
E.N. CENTRAL	198	568	8	141	171	-	3	1	2
Ohio	81	162	4	32	19	-	-	-	-
Ind.	28	32	1	12	10	-	1	-	-
Ill.	55	241	-	73	121	-	1	-	-
Mich.	29	68	3	20	13	-	1	1	-
Wis.	5	65	-	4	8	-	-	-	2
W.N. CENTRAL	126	197	5	37	24	-	-	-	14
Minn.	7	10	-	9	-	-	-	-	-
Iowa	9	14	4	3	5	-	-	-	8
Mo.	110	170	-	18	12	-	-	-	1
N. Dak.	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	4	2	-	-	-	1
Nebr.	-	3	1	-	2	-	-	-	-
Kans.	-	-	-	3	3	-	-	-	4
S. ATLANTIC	641	879	-	225	197	-	5	5	156
Del.	1	18	-	-	3	-	-	-	2
Md.	24	49	-	30	36	-	2	-	53
D.C.	21	31	-	16	11	-	1	-	1
Va.	69	59	-	-	-	-	-	-	38
W. Va.	1	1	-	5	5	-	-	-	3
N.C.	224	244	-	-	49	-	-	4	13
S.C.	92	161	-	41	31	-	-	-	13
Ga.	104	161	-	111	62	-	-	1	30
Fla.	105	155	-	22	-	-	2	-	3
E.S. CENTRAL	418	376	-	67	84	-	-	1	11
Ky.	29	41	-	15	20	-	-	-	-
Tenn.	78	80	-	-	-	-	-	-	-
Ala.	77	107	-	44	47	-	-	-	11
Miss.	234	148	-	8	17	-	-	1	-
W.S. CENTRAL	292	844	-	26	12	-	1	1	7
Ark.	54	106	-	21	9	-	-	-	2
La.	233	260	-	-	-	-	-	-	-
Okla.	5	59	-	5	3	-	-	1	5
Tex.	-	419	-	-	-	-	1	-	-
MOUNTAIN	24	15	-	60	22	-	3	-	9
Mont.	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	4	-	-	-	-	-
Wyo.	-	-	-	1	-	-	-	-	2
Colo.	15	6	-	-	-	-	2	-	-
N. Mex.	-	1	-	10	-	-	-	-	-
Ariz.	6	7	-	33	17	-	-	-	7
Utah	3	-	-	-	-	-	1	-	-
Nev.	-	1	-	12	5	-	-	-	-
PACIFIC	1	201	5	693	675	-	6	-	25
Wash.	1	5	-	21	19	-	1	-	-
Oreg.	-	7	-	8	6	-	-	-	-
Calif.	-	188	5	641	619	-	4	-	16
Alaska	-	-	-	3	3	-	-	-	9
Hawaii	-	1	-	20	28	-	1	-	-
Guam	-	-	-	-	1	-	-	-	-
P.R.	46	53	-	-	-	-	-	-	6
V.I.	1	11	-	-	1	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	1	-	-
C.N.M.I.	-	-	-	11	1	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending February 12, 1994 (6th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	663	472	108	50	20	13	55
Boston, Mass.	163	103	30	20	7	3	20
Bridgeport, Conn.	48	39	5	3	-	1	5
Cambridge, Mass.	28	18	9	1	-	-	2
Fall River, Mass.	28	21	6	1	-	-	1
Hartford, Conn.	57	35	10	5	2	5	1
Lowell, Mass.	30	25	4	-	1	-	3
Lynn, Mass.	16	11	4	1	-	-	-
New Bedford, Mass.	21	15	4	1	-	1	1
New Haven, Conn.	33	23	5	3	2	-	1
Providence, R.I.	76	59	8	6	3	-	2
Somerville, Mass.	7	6	1	-	-	-	-
Springfield, Mass.	64	44	8	7	2	3	5
Waterbury, Conn.	29	25	3	-	1	-	2
Worcester, Mass.	63	48	11	2	2	-	12
MID. ATLANTIC	2,457	1,656	421	281	54	45	142
Albany, N.Y.	47	31	6	9	-	1	3
Allentown, Pa.	26	23	3	-	-	-	3
Buffalo, N.Y.	100	53	21	18	5	3	4
Camden, N.J.	32	17	5	5	3	2	2
Elizabeth, N.J.	21	16	2	2	-	1	-
Erie, Pa.§	34	26	7	1	-	-	-
Jersey City, N.J.	43	24	12	4	1	2	-
New York City, N.Y.	1,282	871	209	159	29	14	59
Newark, N.J.	53	20	18	12	2	1	6
Paterson, N.J.	9	7	1	1	-	-	-
Philadelphia, Pa.	297	179	63	38	7	10	23
Pittsburgh, Pa.§	69	51	12	3	1	2	6
Reading, Pa.	16	12	-	3	1	-	4
Rochester, N.Y.	154	119	19	14	1	1	15
Schenectady, N.Y.	36	29	3	3	-	1	-
Scranton, Pa.§	42	33	7	1	1	-	1
Syracuse, N.Y.	100	75	16	2	2	5	11
Trenton, N.J.	33	22	6	3	-	2	-
Utica, N.Y.	23	20	3	-	-	-	1
Yonkers, N.Y.	40	28	8	3	1	-	4
E.N. CENTRAL	2,580	1,646	466	256	133	79	207
Akron, Ohio	57	42	8	6	-	1	2
Canton, Ohio	41	30	7	3	1	-	1
Chicago, Ill.	662	272	129	124	99	38	56
Cincinnati, Ohio	147	103	24	15	2	3	16
Cleveland, Ohio	173	118	30	12	2	11	8
Columbus, Ohio	176	117	34	13	6	6	11
Dayton, Ohio	138	108	21	7	1	1	11
Detroit, Mich.	230	137	54	22	8	9	10
Evansville, Ind.	51	43	7	-	-	1	5
Fort Wayne, Ind.	60	46	8	4	1	1	5
Gary, Ind.	15	9	6	-	-	-	1
Grand Rapids, Mich.	55	43	7	3	1	1	19
Indianapolis, Ind.	269	187	47	27	6	2	21
Madison, Wis.	35	22	8	2	2	1	6
Milwaukee, Wis.	142	112	20	8	-	2	14
Peoria, Ill.	39	32	7	-	-	-	4
Rockford, Ill.	55	47	6	2	-	-	7
South Bend, Ind.	69	45	19	2	1	2	4
Toledo, Ohio	96	73	14	6	3	-	5
Youngstown, Ohio	70	60	10	-	-	-	1
W.N. CENTRAL	1,001	719	172	66	27	16	72
Des Moines, Iowa	230	137	54	22	8	9	10
Duluth, Minn.	33	28	4	1	-	-	1
Kansas City, Kans.	37	30	4	-	2	-	4
Kansas City, Mo.	115	95	11	6	2	1	4
Lincoln, Nebr.	26	21	4	1	-	-	6
Minneapolis, Minn.	198	152	28	11	6	1	18
Omaha, Nebr.	111	79	25	3	3	1	10
St. Louis, Mo.	119	87	16	9	4	3	13
St. Paul, Minn.	68	51	14	2	1	-	6
Wichita, Kans.	64	39	12	11	1	1	-

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,566	947	323	192	55	49	96
Atlanta, Ga.	199	113	41	35	6	4	9
Baltimore, Md.	253	145	58	35	9	6	29
Charlotte, N.C.	89	61	14	10	3	1	10
Jacksonville, Fla.	142	85	35	14	7	1	7
Miami, Fla.	126	71	28	22	2	3	1
Norfolk, Va.	63	39	12	6	3	3	5
Richmond, Va.	82	53	21	7	1	-	7
Savannah, Ga.	49	39	5	2	2	1	3
St. Petersburg, Fla.	63	49	8	4	-	2	2
Tampa, Fla.	170	126	26	12	3	3	15
Washington, D.C.	330	166	75	45	19	25	8
Wilmington, Del.	U	U	U	U	U	U	U
E.S. CENTRAL	1,002	703	187	68	31	13	110
Birmingham, Ala.	182	123	36	9	8	6	10
Chattanooga, Tenn.	74	57	14	2	-	1	10
Knoxville, Tenn.	147	105	25	11	4	2	19
Lexington, Ky.	56	42	10	3	-	1	6
Memphis, Tenn.	230	159	44	20	7	-	36
Mobile, Ala.	121	90	23	3	3	2	12
Montgomery, Ala.	55	33	8	9	4	1	3
Nashville, Tenn.	137	94	27	11	5	-	14
W.S. CENTRAL	1,588	1,005	330	164	53	33	144
Austin, Tex.	76	55	15	5	1	-	13
Baton Rouge, La.	62	48	10	2	2	-	-
Corpus Christi, Tex.	62	44	14	2	1	1	3
Dallas, Tex.	185	109	32	25	7	12	17
El Paso, Tex.	67	43	16	5	1	2	7
Ft. Worth, Tex.	133	85	25	18	4	1	12
Houston, Tex.	430	244	106	59	16	5	55
Little Rock, Ark.	47	34	8	4	1	-	6
New Orleans, La.	109	59	22	14	9	2	-
San Antonio, Tex.	215	141	44	19	4	7	15
Shreveport, La.	70	50	13	1	4	2	8
Tulsa, Okla.	132	93	25	10	3	1	8
MOUNTAIN	1,014	714	172	79	21	27	85
Albuquerque, N.M.	126	100	13	9	3	1	4
Colo. Springs, Colo.	60	41	14	4	1	-	9
Denver, Colo.	128	87	19	10	5	6	8
Las Vegas, Nev.	183	124	39	12	4	4	16
Ogden, Utah	23	16	4	1	-	2	-
Phoenix, Ariz.	213	138	40	19	6	10	30
Pueblo, Colo.	28	25	2	1	-	-	5
Salt Lake City, Utah	75	47	17	7	2	2	4
Tucson, Ariz.	178	136	24	16	-	2	9
PACIFIC	1,711	1,133	304	196	40	33	129
Berkeley, Calif.	14	11	3	-	-	-	-
Fresno, Calif.	117	90	12	9	2	4	8
Glendale, Calif.	24	21	3	-	-	-	-
Honolulu, Hawaii	73	51	19	-	2	1	5
Long Beach, Calif.	96	66	15	11	2	2	9
Los Angeles, Calif.	348	210	60	60	9	4	17
Pasadena, Calif.	36	22	9	2	1	2	7
Portland, Oreg.	165	116	24	17	5	3	10
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	142	105	20	11	5	1	11
San Francisco, Calif.	219	120	51	42	3	3	11
San Jose, Calif.	193	135	30	22	3	3	31
Santa Cruz, Calif.	23	14	4	3	2	-	2
Seattle, Wash.	108	67	22	11	3	5	5
Spokane, Wash.	59	42	13	-	1	3	4
Tacoma, Wash.	94	63	19	8	2	2	9
TOTAL	13,582¶	8,995	2,483	1,352	434	308	1,040

*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.

Hantavirus — Continued

studies are ongoing to determine whether the lack of IgM ELISA reactivity at CDC potentially resulted from use of available heterologous hantavirus antigens.

Since the identification of the first pathogenic U.S. hantavirus in June 1993, HPS has been well characterized, its etiologic agent (MCV) isolated, its primary rodent reservoir (*P. maniculatus*) identified, and specific diagnostic assays developed (*1,5*). In addition, in August 1993, the sequence of a second unique hantavirus was identified in tissues of a Louisiana resident who died of HPS-like illness (*4*); however, the reservoir associated with this hantavirus has not been determined. The results of the PCR analysis described in this report are consistent with a third new U.S. hantavirus from a distinct rodent reservoir, *S. hispidus*, with an ecologic range extending throughout the southeastern and the southcentral United States (*6*).

The pathogenicity of the new hantavirus to humans is unknown. Therefore, residents of the southeast as well as persons residing within range of *P. maniculatus* (*7*) should minimize exposure to rodents and their excreta (*8*). Suspected cases of HPS should be reported to CDC through state health departments (*1*).

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Current Trends

Receipt of Well-Baby Care — Maine, 1988–1992

Routine well-baby care (i.e., nonillness-related visits to a health-care professional during infancy) provides important opportunities to promote health in infants through timely receipt of recommended vaccinations, detection and treatment of diseases, and identification of potential developmental or psychosocial disorders.* In Maine, although well-baby services are provided as a component of the state's maternal and child health programs, the extent to which parents in Maine use public and private sources of such services and adhere to American Academy of Pediatrics guidelines has not been well characterized. This report uses data from Maine's Pregnancy Risk

*In 1967, the American Academy of Pediatrics established guidelines for the frequency and timing of well-baby visits (*1*); these guidelines were revised in 1988.

Well-Baby Care — Continued

Assessment Monitoring System (PRAMS) to characterize the levels of well-baby care in Maine during 1988–1992.

PRAMS is a CDC-developed, population-based surveillance system used in 13 states[†] and the District of Columbia. PRAMS uses data from birth certificates and from self-reported behavioral surveys of mothers 3–6 months after delivery (*2*). In Maine, a stratified systematic sample of 100–200 new mothers is selected each month from birth certificates; mothers delivering infants of low birthweight (LBW) (<2500 g [5 lb 8 oz] at birth) are oversampled.

Of 5807 residents who gave birth in Maine from June 1988 through May 1992, 4799 (82.6%) responded. Exclusion categories comprised infants who had been hospitalized more than 7 nights after birth or who had died during the interval preceding the survey (n=913), infants who were older or younger than age 3–6 months at the time of the survey (n=779), and infants whose birthweights were unknown or whose mothers did not provide information about the number of visits to a health-care professional (n=359).

Respondents were asked, "How many times has your baby been to a doctor or nurse for baby shots or routine well baby care?" Infants were classified as having had a low level of well-baby care if they were aged 3–4 months and had had no nonillness-related visits to a health-care professional or were aged 5–6 months and had had fewer than two visits. Infants were classified as having had a high level of care if they were aged 3–4 months and had had three or more nonillness-related visits or were aged 5–6 months and had had four or more such visits. All other infants were classified as having had a "usual" level of care. The PRAMS questionnaire also asked about 1) the planning status of the pregnancy; 2) sources of family income; 3) initiation of prenatal care; and 4) knowledge of the mother (before hospital discharge) about where to obtain medical care if the infant should become ill. Birth certificates were used to obtain information about the mother's education, age, marital status, birth interval, and parity; the infant's birthweight and birth date; and the number of prenatal-care visits for that pregnancy. Adequacy of prenatal care was calculated by the Kessner Index, which provides a multidimensional measure that incorporates when prenatal care began, the total number of prenatal visits made by the mother, and the gestational age of the baby (*3*). Data were weighted to account for survey design and nonresponse. Confidence intervals (CIs) were calculated using the standard errors estimated by SUDAAN (*4*).

Of 2024 mothers who gave birth to normal birthweight infants, 22 (1.1%; 95% CI=0.7%–1.5%) reported having had a low number of well-baby–care visits; 895 (44.0%; 95% CI=41.8%–46.2%), a usual number of visits; and 1107 (54.9%; 95% CI=52.7%–57.1%), a high number of visits (Table 1). Of the 724 mothers who gave birth to LBW infants, 13 (1.9%; 95% CI=1.3%–2.5%), reported having had a low number of visits; 238 (33.0%; 95% CI=30.8%–35.2%), a usual number of visits; and 473 (65.1%; 95% CI=62.7%–67.5%), a high number of visits (Table 2).

The level of well-baby care differed statistically by birthweight group. Compared with normal birthweight infants, LBW infants were less likely to receive a usual level of care, 1.2 times as likely to receive a high level, and 1.7 times as likely to receive a

[†]Alabama, Alaska, California, Florida, Georgia, Indiana, Maine, Michigan, New York, Oklahoma, South Carolina, Washington, and West Virginia.

Well-Baby Care — Continued

TABLE 1. Percentage* of normal birthweight infants† aged 3–6 months receiving well-baby care, by level of care§ and selected characteristics of mother — Maine, Pregnancy Risk Assessment Monitoring System, 1988–1992

	Level of care					
	Low (n=22)		Usual (n=895)		High (n=1107)	
Characteristic	%	(SE¶)	%	(SE)	%	(SE)
Education (yrs)						
<12	**	—	44.3	(± 3.3)	54.4	(± 3.3)
≥12	1.0	(±0.2)	44.3	(± 1.1)	54.8	(± 1.2)
Age group (yrs)						
<20	**	—	41.3	(± 3.5)	57.3	(± 3.6)
≥20	1.0	(±0.2)	44.5	(± 1.1)	54.4	(± 1.1)
Marital status						
Married	1.2	(±0.3)	45.4	(± 1.2)	53.4	(± 1.2)
Unmarried	**	—	40.2	(± 2.4)	59.2	(± 2.4)
Parity						
Primiparous	0.6	(±0.3)	37.8	(± 1.6)	61.6	(± 1.6)
Multiparous	1.3	(±0.3)	49.2	(± 1.4)	49.5	(± 1.4)
Birth interval (yrs)††						
<2	**	—	51.2	(± 4.3)	47.0	(± 4.3)
2–4	1.0	(±0.4)	47.5	(± 1.8)	51.5	(± 1.8)
≥5	**	—	53.7	(± 3.0)	44.8	(± 3.0)
Planning status of pregnancy						
Intended	1.2	(±0.3)	44.0	(± 1.4)	54.8	(± 1.4)
Mistimed	**	—	43.4	(± 2.1)	55.8	(± 2.1)
Unwanted	**	—	47.1	(± 4.0)	52.2	(± 4.0)
Don't know	**	—	46.5	(± 4.8)	50.9	(± 4.8)
Sources of family income						
Employment						
Yes	1.1	(±0.2)	44.5	(± 1.2)	54.5	(± 1.2)
No	**	—	42.1	(± 3.2)	56.7	(± 3.2)
Government aid						
Yes	**	—	39.1	(± 2.3)	59.9	(± 2.3)
No	1.1	(±0.3)	45.7	(± 1.2)	53.2	(± 1.2)
Other§§						
Yes	1.1	(±0.5)	44.8	(± 2.3)	54.2	(± 2.3)
No	1.1	(±0.3)	44.0	(± 1.2)	54.9	(± 1.2)
Adequacy of prenatal care¶¶						
Adequate	0.9	(±0.2)	43.7	(± 1.2)	55.4	(± 1.2)
Intermediate	1.9	(±0.7)	46.6	(± 2.5)	51.6	(± 2.5)
Inadequate	**	—	37.7	(± 5.6)	62.4	(± 5.6)
Knowledge of source of pediatric care* **						
Yes	0.8	(±0.3)	44.5	(± 1.4)	54.7	(± 1.4)
No	**	—	54.1	(±12.6)	45.9	(±12.6)
Total	**1.1**	**(±0.2)**	**44.0**	**(± 1.1)**	**54.9**	**(± 1.1)**

* Percentages weighted to account for survey design and nonresponse; totals may not add to 100% because of rounding.
† ≥2500 g (5 lb 8 oz) at birth; n=2024.
§ Low level=infants aged 3–4 months who had had no nonillness-related visits to a health-care professional or infants aged 5–6 months who had had fewer than two such visits. High level=infants aged 3–4 months who had had three or more nonillness-related visits or infants aged 5–6 months who had had four or more such visits. Usual level=all other infants.
¶ Standard error.
** Numbers too small for meaningful analysis.
†† Applies to multiparous mothers only. Sample size of infants receiving low levels of care was 13; usual levels, 573; and high levels, 568.
§§ Includes unemployment compensation, alimony, Social Security benefits, and other sources.
¶¶ Adequacy calculated by the Kessner Index, which provides a multidimensional measure that incorporates when prenatal care began, the total number of prenatal visits made by the mother, and the gestational age of the baby (*3*).
*** Measurement of knowledge before being discharged from hospital (after giving birth) of how to obtain health care if the infant should become ill. Data available for 1990–1992 only. Sample size of infants receiving low levels of care was 10; usual levels, 531; and high levels, 646.

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TABLE 2. Percentage* of low-birthweight (LBW) infants† aged 3–6 months receiving well-baby care, by level of care§ and selected characteristics of mother — Maine, Pregnancy Risk Assessment Monitoring System, 1988–1992

	Level of care					
	Low (n=13)		Usual (n=238)		High (n=473)	
Characteristic	%	(SE¶)	%	(SE)	%	(SE)
Education (yrs)						
<12	3.0	(±0.9)	33.4	(±2.4)	63.6	(±2.5)
≥12	1.5	(±0.3)	33.3	(±1.3)	65.2	(±1.3)
Age group (yrs)						
<20	**	—	37.6	(±3.2)	58.8	(±3.2)
≥20	1.6	(±0.3)	32.4	(±1.2)	66.1	(±1.2)
Marital status						
Married	1.9	(±0.4)	32.7	(±1.3)	65.4	(±1.4)
Unmarried	**	—	34.4	(±2.1)	63.7	(±2.1)
Parity						
Primiparous	1.4	(±0.4)	30.2	(±1.5)	68.5	(±1.6)
Multiparous	2.5	(±0.6)	36.5	(±1.7)	61.1	(±1.7)
Birth interval (yrs)††						
<2	**	—	43.9	(±3.8)	53.3	(±3.8)
2–4	**	—	35.4	(±2.3)	62.3	(±2.3)
≥5	**	—	31.7	(±3.0)	65.7	(±3.1)
Planning status of pregnancy						
Intended	**	—	32.1	(±1.5)	67.0	(±1.5)
Mistimed	**	—	34.1	(±2.4)	63.4	(±2.4)
Unwanted	**	—	40.2	(±4.5)	56.9	(±4.6)
Don't know	**	—	29.5	(±3.4)	65.0	(±3.6)
Sources of family income						
Employment						
Yes	1.6	(±0.3)	32.8	(±1.2)	65.6	(±1.3)
No	**	—	34.6	(±2.7)	62.3	(±2.7)
Government aid						
Yes	3.8	(±0.8)	38.8	(±2.1)	57.4	(±2.1)
No	**	—	30.1	(±1.3)	69.0	(±1.3)
Other§§						
Yes	**	—	27.5	(±2.1)	70.3	(±2.1)
No	1.8	(±0.4)	35.3	(±1.3)	63.0	(±1.4)
Adequacy of prenatal care¶¶						
Adequate	1.9	(±0.4)	34.7	(±1.4)	63.3	(±1.4)
Intermediate	**	—	30.4	(±2.2)	67.6	(±2.2)
Inadequate	**	—	27.8	(±3.8)	70.4	(±3.9)
Knowledge of source of pediatric care* **						
Yes	1.7	(±0.4)	37.1	(±1.5)	61.2	(±1.6)
No	**	—	**	—	**	—
Total	**1.9**	**(±0.3)**	**33.0**	**(±1.1)**	**65.1**	**(±1.2)**

* Percentages weighted to account for survey design and nonresponse; totals may not add to 100% because of rounding.
† <2500 g (5 lb 8 oz) at birth; n=724.
§ Low level=infants aged 3–4 months who had had no nonillness-related visits to a health-care professional or infants aged 5–6 months who had had fewer than two such visits. High level=infants aged 3–4 months who had had three or more nonillness-related visits or infants aged 5–6 months who had had four or more such visits. Usual level=all other infants.
¶ Standard error.
** Numbers too small for meaningful analysis.
†† Applies to multiparous mothers only. Sample size of infants receiving low levels of care was eight; usual levels, 128; and high levels, 221.
§§ Includes unemployment compensation, alimony, Social Security benefits, and other sources.
¶¶ Adequacy calculated by the Kessner Index, which provides a multidimensional measure that incorporates when prenatal care began, the total number of prenatal visits made by the mother, and the gestational age of the baby (*3*).
*** Measurement of knowledge before being discharged from hospital (after giving birth) of how to obtain health care if the infant should become ill. Data available for 1990–1992 only. Sample size of infants receiving low levels of care was seven; usual levels, 154; and high levels, 251.

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low level. For mothers of LBW infants, income from government aid was the only characteristic statistically associated with a low level of care ($p<0.04$). Mothers of LBW infants whose pregnancies were unwanted were less likely to obtain a high level of care than were those whose pregnancies were intended. Levels of well-baby care did not differ statistically within birthweight group in relation to other factors (i.e., education, family income from employment, adequacy of prenatal care, and knowledge of source of pediatric care).

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Editorial Note: Although state and territorial health departments monitor maternal and child health status, the receipt of well-baby–care services in the United States has not been characterized. The findings in this report indicate that most (98%–99%) women who gave birth in Maine during 1988–1992 reported having obtained a usual or high number of well-baby–care visits during the early postpartum period (i.e., up to 6 months after birth). This high level may reflect at least four features of the maternal and infant health program in Maine. First, Medicaid eligibility for infants aged 0–1 year is at the maximum state-designated level—185% of the federal poverty level. Second, approximately 60% of primary-care physicians in Maine participate in the state Medicaid Preventive Health Program[§] (D. Curtis, Maine Department of Human Services, personal communication, 1993). Third, Maine provides routine vaccination coverage to all state residents; providers may charge no more than a $2 administrative fee per vaccination for children. Fourth, information provided to parents during home visits by community and public health nurses emphasizes the importance of well-baby care.

The findings in this report are subject to at least three limitations. First, because the information about quantity of well-baby visits was self-reported, respondents may have counted sick-baby visits in their totals. Second, the substantial proportion of LBW infants who received high levels of care may reflect the routine close monitoring of LBW infants (CDC, unpublished data, 1993). Third, because the number of normal birthweight and LBW infants with low levels of care (22 and 13, respectively) was small, this analysis must be interpreted with caution.

PRAMS provides a means for state program managers to investigate behaviors related to seeking infant care and to monitor and assess their efforts toward achieving the year 2000 national health objective of increasing to at least 90% the proportion of infants aged ≤18 months who receive recommended primary-care services at the appropriate intervals (objective 14.16) (*5*). In addition, in Maine and other states, PRAMS provides data about early infancy-care levels that can serve as a baseline for program planning and development.

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[§] Maine's version of the federally mandated Early and Periodic Screening Diagnosis and Treatment program.

Well-Baby Care — Continued

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5. Public Health Service. Healthy people 2000: national health promotion and disease prevention objectives—full report, with commentary. Washington, DC: US Department of Health and Human Services, Public Health Service, 1991; DHHS publication no. (PHS)91-50212.

Notice to Readers

NIOSH Alert: Request for Assistance in Preventing Homicide in the Workplace

CDC's National Institute for Occupational Safety and Health (NIOSH) periodically issues alerts on workplace hazards that have caused death, serious injury, or illness to workers. One such alert, *Request for Assistance in Preventing Homicide in the Workplace* (*1*), was recently published and is available to the public.*

From 1980 through 1989, occupational homicides accounted for approximately 7600 deaths—12% of all deaths from injury in the workplace (*2*). During this period, homicide was the third leading cause of death from injury in the workplace and was the leading cause of occupational death from injury for women. Guns were used in 75% of all occupational homicides. No current Occupational Safety and Health Administration regulations apply specifically to occupational homicide.

Many employers and workers may be unaware of the risk for occupational homicide. High-risk occupations are taxicab drivers/chauffeurs, law enforcement officers, hotel clerks, gas station workers, security guards, stock handlers/baggers, store owners/managers, and bartenders. This alert contains recommendations for preventing occupational homicides.

References

1. NIOSH. NIOSH alert: request for assistance in preventing homicide in the workplace. Cincinnati: US Department of Health and Human Services, Public Health Service, CDC, NIOSH, 1993; DHHS publication no. (NIOSH)93-109.
2. NIOSH. Fatal injuries to workers in the United States, 1980–1989: a decade of surveillance—national profile. Cincinnati: US Department of Health and Human Services, Public Health Service, CDC, NIOSH, 1993; DHHS publication no. (NIOSH)93-108.

*Single copies of this document are available without charge from the Publications Office, NIOSH, CDC, Mailstop C-13, 4676 Columbia Parkway, Cincinnati, OH 45226-1998; telephone (800) 356-4674; fax (513) 533-8573.

Notice to Readers

Publication of Draft Guideline for Prevention of Nosocomial Pneumonia

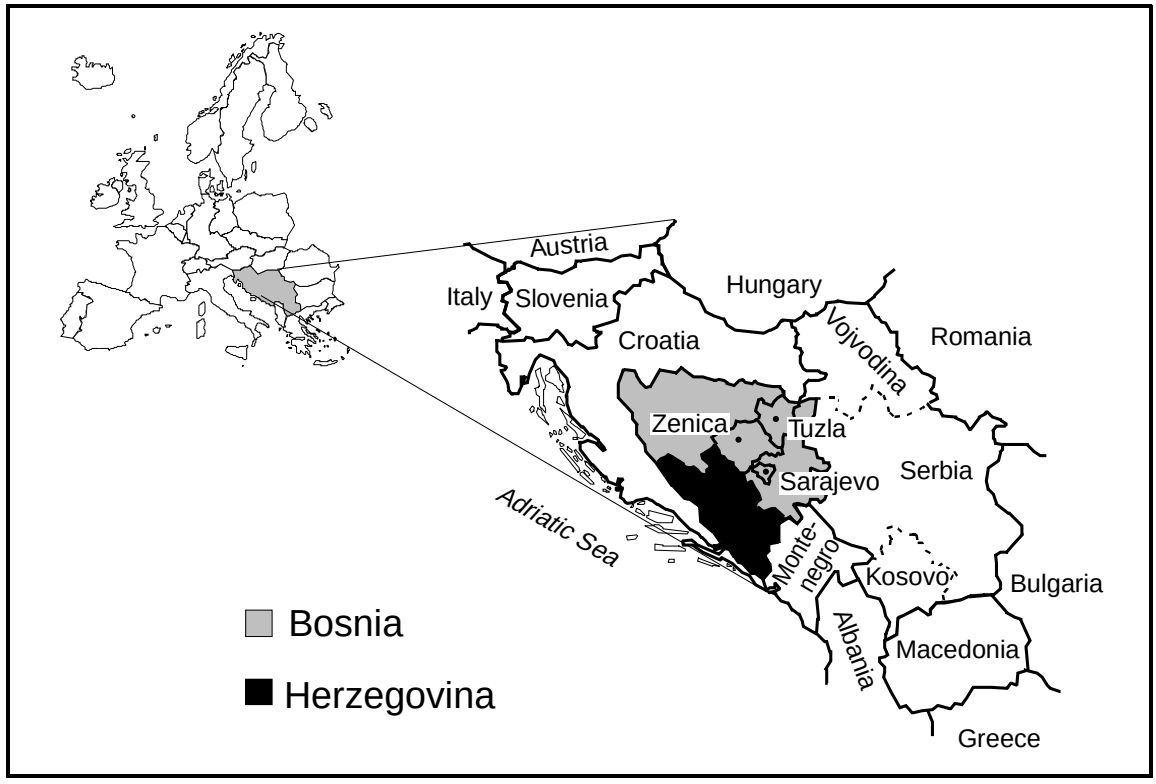
The Hospital Infection Control Advisory Committee and CDC published the *Draft Guideline for Prevention of Nosocomial Pneumonia,* in the February 2, 1994, *Federal Register* * for public comment. Copies of the document are available for $6 (stock number 069-001-00070-0) from the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250; telephone (202) 783-3238. In addition, the *Federal Register* may be viewed and photocopied at most libraries designated as U.S. Government Depository Libraries and at other public or academic libraries receiving the *Federal Register*. Comments must be received in writing by April 4, 1994, at CDC, Attention: Pneumonia Guideline, Mailstop A-07, 1600 Clifton Road, NE, Atlanta, GA 30333; telephone (404) 639-1550.

*59 FR 4980–5022.

Erratum: Vol. 42, No. 50

In the article "Status of Public Health—Bosnia and Herzegovina, August–September 1993," the map on page 979 contained errors. The correct map is printed below.

FIGURE 1. Former Yugoslav republics, including regions of Bosnia and Herzegovina



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

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