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Human Rabies — Washington, 1995

On March 15, 1995, a 4-year-old girl who resided in Lewis County, Washington, died from rabies. This report summarizes the clinical course, epidemiologic investigation, and probable exposure history of the case.

On March 8, the child was transported to a local hospital after a 2-day history of drowsiness, listlessness, abdominal pain, anorexia, sore throat, and pain on the left side of her neck. During examination in the emergency department, she had nasal congestion and drooling. Rhinitis and bilateral conjunctivitis were diagnosed; antibiotics and symptomatic treatment were prescribed, and she was discharged.

On the morning of March 9, she was transported to the same hospital because of an axillary temperature of 104.0 F (40.0 C) and behavioral changes. In addition, she had had hallucinations, difficulty standing, and insomnia and refused to drink fluids. On examination in the emergency department, findings included an axillary temperature of 101.2 F (38.4 C), pulse of 210 per minute, respiratory rate of 32 per minute, an enlarged reactive right pupil, and tremors. Laboratory test results included a white blood cell count of 20,800/mm^3 (normal: 5000–10,000 mm^3), blood urea nitrogen of 45 mg/dL (normal: 0–25 mg/dL), and sodium level of 151 mmol/L (normal: 135–145 mmol/L). Preliminary diagnoses included dehydration and possible drug intoxication, and intravenous fluids were administered. Screening of urine for drugs was negative, and computerized axial tomography of the brain was within normal limits.

Later on the morning of March 9, her temperature increased, and she had a seizure. Cerebrospinal fluid findings were nonspecific. She was intubated for hypoventilation. In the emergency department and during air transport to the intensive-care unit of a regional hospital, she became bradycardic and required cardiopulmonary resuscitation. On arrival at the regional hospital, preliminary differential diagnoses included sepsis, viral encephalitis, and drug toxicity; ceftriaxone and acyclovir were administered. She became comatose, and an electroencephalogram (EEG) obtained on March 10 revealed generalized sharp and slow wave discharges. On March 13, an EEG revealed moderate to severe generalized slowing of cerebral activity. Based on information from family members about the child's possible exposure to a bat, diagnostic testing for rabies was initiated. A nuchal skin biopsy obtained on March 13 was positive for rabies by direct fluorescent antibody (DFA) testing at CDC on March 14.

On March 15, the child died. On autopsy, gross examination revealed massive cerebral edema with uncal herniation and intracytoplasmic inclusions in the brain and

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spinal cord. At the Washington State Department of Health Public Health Laboratories a specimen of brain tissue obtained at autopsy also was positive by DFA, and rabies virus was isolated by mouse inoculation. Analysis at CDC also included viral isolation from sputum obtained on March 14 and a positive DFA and nucleotide sequence analysis result from brain tissue obtained at autopsy.

During the child's hospitalization, family members reported that, on February 18, a bat had been found in her bedroom. Family members had examined the child but found no evidence of a bite. The bat was removed from the house, destroyed, and buried in the yard. On March 14, the local health department exhumed the bat. Despite trauma, decomposition, and partial consumption of the specimen by maggots, the bat brain was positive for rabies by DFA and nucleotide sequence analysis. Presumptive identification of the bat at CDC was either *Myotis californicus* or *M. ciliolabrum*. In addition, based on nucleotide sequence analysis, the rabies virus from the decedent and the bat were identical and was identified as a variant associated with small *Myotis* bats in the western United States.

Based on possible percutaneous or mucous membrane exposure to tears or saliva from the patient, postexposure rabies immunoprophylaxis was administered to 72 persons: six registered nurses, six respiratory therapists, one laboratory technician, one diagnostic imaging technician, two physicians, six family members, and 50 children and adults who were contacts in a day care center.

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Editorial Note: The rabies case described in this report was the first to be documented in a human in the United States during 1995 and is consistent with a major epidemiologic pattern: since the 1950s, bats increasingly have been implicated as wildlife reservoirs for variants of rabies virus transmitted to humans. Variants of rabies virus associated with bats have been identified from 12 of the 25 cases of human rabies diagnosed in the United States since 1980. However, a clear history of animal bite exposure was documented for only six of these 25 cases. This finding suggests that even apparently limited contact with bats or other animals infected with a bat variant of rabies virus may be associated with transmission.

The inability of health-care providers to elicit information from patients about potential exposures to bats may reflect circumstances that hinder recall or the limited injury inflicted by a bat bite. For example, the family members of the child described in this report had not witnessed contact between the child and the bat, and she denied a bite or any other contact on the night of the incident; however, both the epidemiologic findings and molecular data indicated that infection resulted from contact with the bat.

The case in Washington and reports of similar cases (*1,2*), underscore that, in situations in which a bat is physically present and the person(s) cannot exclude the possibility of a bite, postexposure treatment should be considered unless prompt testing of the bat has ruled out rabies infection. This recommendation should be used in

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conjunction with guidelines of the Advisory Committee on Immunization Practices (*3*) to maximize a health-care provider's ability to respond to situations in which accurate exposure histories cannot be obtained and to ensure that inappropriate postexposure treatments are minimized.

References

1. CDC. Human rabies—California, 1994. MMWR 1994;43:455–7.
2. CDC. Human rabies—New York, 1993. MMWR 1993;42:799,805–6.
3. ACIP. Rabies prevention—United States, 1991: recommendations of the Immunization Practices Advisory Committee (ACIP). MMWR 1991;40(no. RR-3).

Blood Lead Levels Among Children in a Managed-Care Organization — California, October 1992–March 1993

Despite substantial progress in reducing exposures to lead among children, as recently as 1991, 9% of children in the United States had blood lead levels (BLLs) of ≥10 µg/dL (*1*)—levels that can adversely affect intelligence and behavior. In 1991, CDC recommended screening all children for lead exposure except those residing in communities in which large numbers or percentages previously had been screened and determined not to have lead poisoning (*2*). Subsequently, the California Department of Health Services (CDHS) issued a directive to all California health-care providers participating in the Child Health and Disability Prevention Program to routinely screen children for lead poisoning in accordance with the 1991 CDC guidelines (*3*). This report presents findings of BLL testing during 1992–1993 from a managed-care organization that provides primary-care services to Medicaid beneficiaries in several locations in California (i.e., Los Angeles County, Orange County, San Bernardino County, Riverside County, Sacramento, and Placerville).

From October 1992 through March 1993, BLLs were measured for 2864 consecutive children aged 1–6 years who received Medicaid benefits. Data were not collected about the number of children whose families did not consent to testing nor about those from whom blood could not be collected. Blood submitted by venipuncture was analyzed by a laboratory certified by the CDHS as proficient in blood lead analysis. Families completed a risk questionnaire (*2*) about exposures to older housing, home renovation or remodeling, adults with jobs or hobbies that involve lead, and industrial sources of lead, and answered a question about whether the child's playmates or siblings were known to have BLLs ≥10 µg/dL. Children were categorized as "low risk" if all five questions were answered "no" or "high risk" if one or more questions were answered "yes."

Overall, 2808 (98.0%) children had BLLs <10 µg/dL; 46 (1.7%) had BLLs 10–14 µg/dL, and 10 (0.3%) had BLLs ≥15 µg/dL (Tables 1 and 2). The percentage of children with BLLs ≥10 µg/dL was similar across age groups (Table 1). Although BLLs varied by clinic site (Table 2), no site had a prevalence of elevated BLLs exceeding 4.6%.

The risk questionnaire had a sensitivity of 46%, specificity of 74%, and predictive values positive and negative of 3.4% and 98.6%, respectively. The prevalence of increased BLLs was greater among children identified as high risk (3.4%) than among other children (1.4%, prevalence ratio: 2.4; 95% confidence interval=1.4%–4.1%).

Blood Lead Levels — Continued

TABLE 1. Blood lead levels (BLLs) among children who were Medicaid beneficiaries and received care from a managed-care organization,* by age — California, October 1992–March 1993

Age (yrs)	Children with BLLs <10 µg/dL		Children with elevated BLLs					
			10–14 µg/dL	15–19 µg/dL	20–44 µg/dL	≥45 µg/dL	Total	
	No.	(%)					No.	(%)
1	719	(97.8)	13	2	1	0	**16**	**(2.2)**
2	587	(98.3)	9	0	1	0	**10**	**(1.7)**
3	450	(98.7)	4	1	1	0	**6**	**(1.3)**
4	511	(98.5)	5	0	3	0	**8**	**(1.5)**
5	350	(96.7)	11	0	1	0	**12**	**(3.3)**
6	191	(97.9)	4	0	0	0	**4**	**(2.1)**
Total	**2808**	**(98.0)**	**46**	**3**	**7**	**0**	**56**	**(2.0)**

*Data from sites located in Los Angeles County, Orange County, San Bernardino County, Riverside County, and Placerville.

TABLE 2. Blood lead levels among children who were Medicaid beneficiaries and received care from a managed-care organization, by clinic site — California, October 1992–March 1993

Clinic site	<10 µg/dL		10–14 µg/dL		15–19 µg/dL		20–44 µg/dL	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Los Angeles County								
Wilmington/Compton	419	(95.4)	17	(3.9)	1	(0.2)	2	(0.5)
Whittier/El Monte	323	(97.3)	7	(2.1)	0		2	(0.6)
Pomona	475	(99.0)	5	(1.0)	0		0	
Lancaster/Palmdale	578	(99.8)	0		0		1	(0.2)
Orange County	350	(97.8)	5	(1.4)	1	(0.3)	2	(0.6)
San Bernardino County	342	(98.3)	5	(1.4)	1	(0.3)	0	
Riverside County	164	(97.6)	4	(2.4)	0		0	
Sacramento	144	(98.0)	3	(2.0)	0		0	
Placerville	13	(100.0)	0		0			
Total	**2808**	**(98.0)**	**46**	**(1.7)**	**3**	**(0.1)**	**7**	**(0.2)**

Based on the CDHS reimbursement rate of $22.45 per test, the cost of screening tests per case identified was $1148 to identify a child with a BLL ≥10 µg/dL and $9185 to identify a child with a BLL ≥20 µg/dL.

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Editorial Note: From 1991 through 1993, the number of California children identified with BLLs of at least 25 µg/dL increased from approximately 40 per year to approximately 500 per year (*3*). Universal screening also has substantially increased the number of lead-exposed children requiring individual management identified in some populations outside California (*4*).

The burden of lead exposure varies among different U.S. communities and population subgroups. For example, prevalences of elevated BLLs have ranged from 37%

among black children who reside in central cities to 5% among non-Hispanic white children who do not live in central cities (*1*). The prevalences of elevated BLLs in smaller jurisdictions or nonrepresentative clinic-based populations also varies widely, with lead-exposure prevalences ranging from <1% (*5*) to >50% (*6*). Purposes of this study were to estimate lead-exposure prevalence in the population served by the managed-care organization, assess the performance of a questionnaire in identifying higher risk children, and help assess the usefulness of a universal screening policy in this population.

The finding that prevalences of elevated BLLs were low among Medicaid recipients attending clinics at the managed-care organization was unexpected because previous population-based surveys in Compton and Sacramento had documented substantially higher prevalences of lead exposure (*7*). However, because the likelihood of lead exposure is greater in the summer and this assessment encompassed winter months (*8*), seasonal patterns may have accounted for some of the difference. The difference also may have reflected variations in the study design between this (clinic-based) and previous (population-based) assessments (*9*) and previously documented wide variations in prevalences of elevated BLLs among even apparently homogenous groups (*10*). Because characteristics of children receiving care at the managed-care organization probably differ from those of other groups of children in California, the findings in this report cannot be generalized.

In this population, a standard risk questionnaire was of limited use in identifying children at higher risk for lead exposure: the prevalence of elevated BLLs was 3.4% in "high risk" children compared with 1.4% in lower risk children. Although this difference was statistically significant, the clinical utility of this finding is limited as a means for targeting blood lead testing. The usefulness of questionnaires to target BLL screening might be increased by adding locally important risk factors to such questionnaires (*10*). Questionnaires also may be useful in some settings to target education about potentially remediable risk factors for lead exposure regardless of children's current BLLs.

The primary strategy for preventing lead poisoning is to reduce lead sources in the environment before children are exposed. However, because large environmental reservoirs of lead persist, especially in older housing, BLL screening and follow-up of children with elevated BLLs continues to be an important method for controlling lead exposure among children.

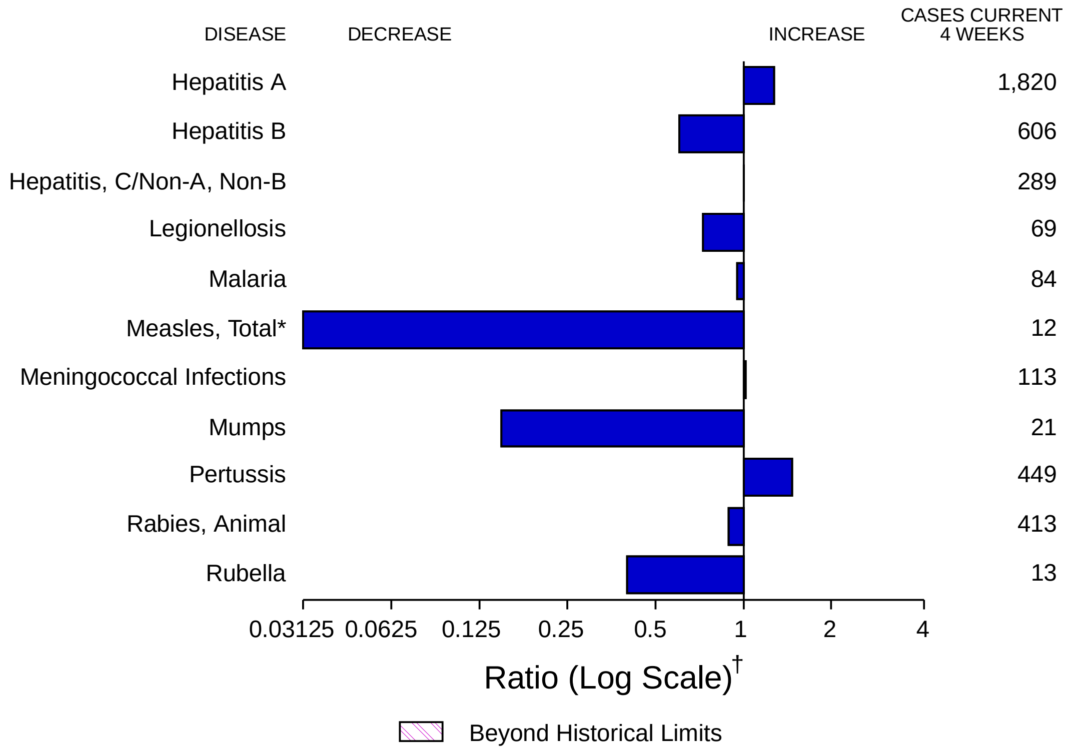
The role of universal screening in relatively low-prevalence communities and practices has nonetheless been questioned (*6*). The purpose of screening is to identify children who require individual follow-up and medical or environmental management (i.e., children whose BLLs are persistently at least 15 μg/dL). In populations such as those served by the managed-care organization, in which small numbers of children who require individual management are identified by universal screening, alternative approaches to the prevention of childhood lead poisoning may include a combination of environmental controls, education, and more selective screening.

References

1. Brody DJ, Pirkle JL, Kramer RA, et al. Blood lead levels in the U.S. population: phase 1 of the Third National Health and Nutrition Examination Survey (NHANES III, 1988 to 1991). JAMA 1994;272:277–83.

(Continued on page 635)

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending August 26, 1995, with historical data — United States



*The large apparent decrease in the number of 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 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 August 26, 1995 (34th Week)

	Cum. 1995		Cum. 1995
Anthrax	-	Psittacosis	43
Brucellosis	60	Rabies, human	1
Cholera	11	Rocky Mountain Spotted Fever	322
Congenital rubella syndrome	4	Syphilis, congenital, age < 1 year†	132
Diphtheria	-	Tetanus	18
*Haemophilus influenzae**	794	Toxic shock syndrome	125
Hansen Disease	87	Trichinosis	24
Plague	6	Typhoid fever	198
Poliomyelitis, Paralytic	-		

*Of 775 cases of known age, 185 (24%) were reported among children less than 5 years of age.
†Updated quarterly from reports to the Division of STD Prevention, National Center for Prevention Services. This total through first quarter 1995.
-: no reported cases

TABLE II. Cases of selected notifiable diseases, United States, weeks ending August 26, 1995, and August 27, 1994 (34th Week)

Reporting Area	AIDS*	Gonorrhea		Hepatitis (Viral), by type: A		B		C/NA,NB		Legionellosis	
	Cum. 1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	42,294	226,365	259,398	17,358	15,279	6,411	7,486	2,799	2,654	805	1,001
NEW ENGLAND	2,116	3,102	5,252	175	202	129	239	76	101	18	23
Maine	74	58	56	19	20	7	11	-	-	5	3
N.H.	61	72	70	6	15	14	16	11	8	1	-
Vt.	18	34	20	4	6	1	6	1	7	-	-
Mass.	937	1,867	1,989	71	81	53	143	60	66	10	10
R.I.	147	325	307	20	17	8	6	4	20	2	10
Conn.	879	746	2,810	55	63	46	57	-	-	N	N
MID. ATLANTIC	10,897	22,822	29,019	1,013	1,099	785	984	262	319	118	156
Upstate N.Y.	1,293	3,846	6,544	255	399	260	264	143	150	30	35
N.Y. City	5,641	7,375	10,997	478	393	233	205	1	1	3	-
N.J.	2,567	3,109	3,382	132	206	166	265	90	139	17	29
Pa.	1,396	8,492	8,096	148	101	126	250	28	29	68	92
E.N. CENTRAL	3,311	49,014	52,487	1,909	1,478	639	790	178	222	212	295
Ohio	673	15,075	14,492	1,208	520	79	117	7	17	108	140
Ind.	338	5,373	5,635	110	252	155	143	1	8	49	33
Ill.	1,408	13,289	16,006	217	372	94	211	33	61	13	26
Mich.	675	11,560	11,429	249	177	271	254	137	136	21	54
Wis.	217	3,717	4,925	125	157	40	65	-	-	21	42
W.N. CENTRAL	982	12,841	14,537	1,212	740	419	434	76	60	78	71
Minn.	219	1,828	2,085	125	163	37	43	2	14	-	2
Iowa	54	930	947	48	33	31	19	9	7	17	26
Mo.	427	7,361	8,127	863	335	302	324	46	14	42	23
N. Dak.	5	19	27	20	4	4	-	4	1	4	4
S. Dak.	9	117	125	37	24	2	-	1	-	-	-
Nebr.	75	697	924	34	100	20	23	6	10	9	11
Kans.	193	1,889	2,302	85	81	23	25	8	14	6	5
S. ATLANTIC	10,753	65,716	68,841	825	778	941	1,404	218	308	143	248
Del.	192	1,414	1,241	7	16	2	10	1	1	2	26
Md.	1,429	7,471	12,308	142	110	171	229	2	17	23	55
D.C.	640	2,850	4,789	17	16	15	36	-	-	4	5
Va.	885	6,211	8,548	133	108	75	84	9	18	13	5
W. Va.	47	471	503	16	11	35	26	38	22	3	1
N.C.	586	15,818	17,563	77	90	194	187	41	44	25	17
S.C.	569	7,953	8,462	31	30	33	23	16	6	21	9
Ga.	1,443	10,080	U	54	25	63	497	15	163	23	92
Fla.	4,962	13,448	15,427	348	372	353	312	96	37	29	38
E.S. CENTRAL	1,397	28,698	30,421	1,033	380	582	790	702	601	34	67
Ky.	178	3,172	3,245	26	113	43	59	13	19	6	8
Tenn.	562	8,970	9,592	850	151	463	678	687	570	21	33
Ala.	378	12,057	10,589	59	63	76	53	2	12	6	11
Miss.	279	4,499	6,995	98	53	-	-	-	-	1	15
W.S. CENTRAL	3,729	21,718	31,305	2,398	1,956	994	743	445	191	11	31
Ark.	166	2,080	4,494	343	111	36	18	4	6	1	6
La.	609	7,678	8,085	74	101	133	114	113	106	2	10
Okla.	174	1,496	3,114	580	189	307	90	297	41	3	10
Tex.	2,780	10,464	15,612	1,401	1,555	518	521	31	38	5	5
MOUNTAIN	1,328	5,565	6,378	2,696	2,938	524	434	297	298	89	64
Mont.	15	43	66	71	17	19	17	10	5	4	14
Idaho	31	76	58	227	226	59	62	39	61	2	1
Wyo.	7	36	52	88	20	17	18	123	105	8	3
Colo.	453	1,894	2,169	351	331	80	73	41	51	37	14
N. Mex.	111	678	665	565	737	198	139	36	38	3	3
Ariz.	351	1,938	2,034	798	1,132	80	44	26	13	7	4
Utah	87	131	177	487	317	46	45	8	12	13	6
Nev.	273	769	1,157	109	158	25	36	14	13	15	19
PACIFIC	7,781	16,889	21,158	6,097	5,708	1,398	1,668	545	554	102	46
Wash.	581	1,709	1,937	540	738	122	156	144	153	18	8
Oreg.	256	212	684	1,274	649	59	94	29	25	-	-
Calif.	6,733	14,113	17,457	4,145	4,127	1,196	1,383	353	372	79	36
Alaska	50	458	597	29	158	9	11	1	-	-	-
Hawaii	161	397	483	109	36	12	24	18	4	5	2
Guam	-	51	85	2	18	1	4	-	-	1	1
P.R.	1,635	334	339	75	41	496	226	229	119	-	-
V.I.	25	6	17	-	2	2	6	-	1	-	-
Amer. Samoa	-	18	20	5	6	-	-	-	-	-	-
C.N.M.I.	-	23	34	15	5	7	1	-	-	-	-

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands
*Updated monthly to the Division of HIV/AIDS Prevention, National Center for Prevention Services, last update July 27, 1995.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending August 26, 1995, and August 27, 1994 (34th Week)

Reporting Area	Lyme Disease		Malaria		Measles (Rubeola) Indigenous		Measles (Rubeola) Imported*		Measles (Rubeola) Total		Meningococcal Infections		Mumps	
	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	1995	Cum. 1995	1995	Cum. 1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	4,844	7,280	698	677	-	217	-	18	235	833	2,114	1,922	551	992
NEW ENGLAND	1,301	1,878	33	50	-	6	-	1	7	27	98	88	10	15
Maine	16	13	4	3	-	-	-	-	-	5	7	18	4	3
N.H.	16	15	1	3	-	-	-	-	-	1	17	8	1	4
Vt.	7	11	1	3	-	-	-	-	-	3	6	2	-	-
Mass.	117	111	10	25	-	1	-	1	2	7	36	38	2	1
R.I.	225	286	3	5	-	5	-	-	5	7	-	-	1	1
Conn.	920	1,442	14	11	-	-	-	-	-	4	32	22	2	6
MID. ATLANTIC	2,808	4,143	174	129	-	6	-	4	10	210	252	201	78	85
Upstate N.Y.	1,494	2,623	41	37	-	1	-	-	1	16	78	62	22	24
N.Y. City	81	8	85	42	-	2	-	3	5	13	32	24	9	4
N.J.	560	916	34	28	-	3	-	1	4	173	71	45	6	13
Pa.	673	596	14	22	-	-	-	-	-	8	71	70	41	44
E.N. CENTRAL	55	425	74	69	-	7	-	3	10	102	287	278	92	160
Ohio	37	27	7	8	-	1	-	-	1	17	89	78	29	42
Ind.	10	13	13	9	-	-	-	-	-	1	39	38	3	6
Ill.	3	19	32	32	-	-	-	2	2	56	71	95	29	72
Mich.	5	5	13	18	-	4	-	1	5	25	54	38	31	33
Wis.	-	361	9	2	-	2	-	-	2	3	34	29	-	7
W.N. CENTRAL	96	144	17	32	-	2	-	-	2	170	134	125	36	49
Minn.	42	58	3	10	-	-	-	-	-	-	22	12	2	4
Iowa	6	11	1	4	-	-	-	-	-	7	24	16	8	11
Mo.	30	67	6	11	-	1	-	-	1	160	53	60	22	31
N. Dak.	-	-	1	1	-	-	-	-	-	-	1	1	-	2
S. Dak.	-	-	1	-	-	-	-	-	-	-	5	7	-	-
Nebr.	1	3	3	4	-	-	-	-	-	2	12	9	4	1
Kans.	17	5	2	2	-	1	-	-	1	1	17	20	-	-
S. ATLANTIC	400	516	153	125	-	10	-	1	11	53	383	281	82	146
Del.	7	64	1	3	-	-	-	-	-	-	5	5	-	-
Md.	267	154	40	47	-	-	-	1	1	4	27	25	20	41
D.C.	1	4	13	8	-	-	-	-	-	-	3	3	-	-
Va.	37	105	35	18	-	-	-	-	-	2	46	52	16	32
W. Va.	18	13	1	-	-	-	-	-	-	37	8	11	-	3
N.C.	41	59	13	7	-	-	-	-	-	3	58	42	16	35
S.C.	9	7	-	3	U	-	U	-	-	-	52	17	7	6
Ga.	12	100	14	18	-	2	-	-	2	2	76	62	8	8
Fla.	8	10	36	21	-	8	-	-	8	5	108	64	15	21
E.S. CENTRAL	31	32	12	24	-	-	-	-	-	28	133	142	13	16
Ky.	5	20	1	7	-	-	-	-	-	-	46	33	-	-
Tenn.	18	9	5	9	-	-	-	-	-	28	35	25	-	6
Ala.	6	3	5	7	-	-	-	-	-	-	29	55	4	3
Miss.	2	-	1	1	-	-	-	-	-	-	23	29	9	7
W.S. CENTRAL	78	79	17	33	-	19	-	1	20	16	265	227	35	175
Ark.	5	4	3	3	-	2	-	-	2	1	22	36	3	5
La.	3	-	2	5	-	17	-	1	18	1	39	31	8	21
Okla.	33	46	1	3	-	-	-	-	-	-	26	23	-	23
Tex.	37	29	11	22	-	-	-	-	-	14	178	137	24	126
MOUNTAIN	9	9	40	22	-	49	-	1	50	162	149	134	23	125
Mont.	-	-	3	-	-	-	-	-	-	-	2	6	1	-
Idaho	-	3	1	2	-	-	-	-	-	-	6	15	2	7
Wyo.	5	3	-	1	-	-	-	-	-	-	6	5	-	2
Colo.	1	1	17	10	-	8	-	-	8	19	37	24	1	3
N. Mex.	1	-	4	3	-	30	-	1	31	-	30	13	N	N
Ariz.	-	-	7	1	-	10	-	-	10	1	48	46	2	91
Utah	-	1	5	4	-	-	-	-	-	133	13	18	11	12
Nev.	2	1	3	1	-	1	-	-	1	9	7	7	6	10
PACIFIC	66	54	178	193	-	118	-	7	125	65	413	446	182	221
Wash.	7	-	15	21	-	16	-	4	20	3	71	69	10	14
Oreg.	4	5	7	12	-	1	-	-	1	-	63	98	N	N
Calif.	55	49	145	147	-	101	-	2	103	53	268	272	155	191
Alaska	-	-	1	1	-	-	-	-	-	5	7	2	13	2
Hawaii	-	-	10	12	-	-	-	1	1	4	4	5	4	14
Guam	-	-	-	-	U	-	U	-	-	228	3	-	3	6
P.R.	-	-	1	3	-	11	-	-	11	11	14	6	-	2
V.I.	-	-	-	-	U	-	U	-	-	-	-	-	2	3
Amer. Samoa	-	-	-	-	U	-	U	-	-	-	-	-	-	2
C.N.M.I.	-	-	1	1	U	-	U	-	-	29	-	-	-	2

*For imported measles, cases include only those resulting from importation from other countries.
N: Not notifiable U: Unavailable -: no reported cases

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending August 26, 1995, and August 27, 1994 (34th Week)

Reporting Area	Pertussis			Rubella			Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal	
	1995	Cum. 1995	Cum. 1994	1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	93	2,161	2,454	1	111	202	9,768	14,060	12,370	14,132	4,569	4,893
NEW ENGLAND	7	277	232	-	33	126	114	153	324	307	1,044	1,212
Maine	-	22	3	-	1	-	2	4	12	-	22	-
N.H.	-	21	48	-	1	-	1	3	9	13	113	111
Vt.	-	41	31	-	-	-	-	-	3	4	127	99
Mass.	7	180	126	-	6	123	43	64	183	161	328	465
R.I.	-	1	5	-	-	2	2	12	29	32	211	5
Conn.	-	12	19	-	25	1	66	70	88	97	243	532
MID. ATLANTIC	21	176	390	-	11	6	567	936	2,583	2,932	873	1,256
Upstate N.Y.	10	94	162	-	4	5	43	116	302	366	324	941
N.Y. City	-	14	76	-	7	-	261	417	1,388	1,725	-	-
N.J.	-	5	12	-	-	1	120	147	492	495	243	193
Pa.	11	63	140	-	-	-	143	256	401	346	306	122
E.N. CENTRAL	9	212	384	-	4	9	1,673	2,081	1,155	1,328	51	42
Ohio	-	82	106	-	-	-	590	818	184	201	6	2
Ind.	-	13	46	-	-	-	168	163	45	115	9	11
Ill.	7	52	80	-	1	1	622	699	635	680	3	12
Mich.	2	53	33	-	3	8	181	180	243	291	26	10
Wis.	-	12	119	-	-	-	112	221	48	41	7	7
W.N. CENTRAL	-	117	113	-	-	2	514	817	388	355	213	153
Minn.	-	43	51	-	-	-	28	29	87	80	6	14
Iowa	-	6	6	-	-	-	34	40	46	35	84	65
Mo.	-	27	29	-	-	2	434	701	148	155	19	14
N. Dak.	-	6	4	-	-	-	-	1	3	6	23	9
S. Dak.	-	8	6	-	-	-	-	1	15	17	49	24
Nebr.	-	7	7	-	-	-	9	11	17	16	4	-
Kans.	-	20	10	-	-	-	9	34	72	46	28	27
S. ATLANTIC	3	213	242	1	26	14	2,460	3,630	2,196	2,581	1,381	1,339
Del.	-	9	2	-	-	-	9	20	12	27	33	39
Md.	-	18	57	-	-	-	137	185	241	218	265	380
D.C.	-	4	5	-	-	-	75	157	67	81	11	2
Va.	-	10	27	-	-	-	369	517	146	212	268	262
W. Va.	-	-	3	-	-	-	8	8	53	59	81	55
N.C.	-	81	58	-	1	-	754	1,141	277	293	324	108
S.C.	U	17	12	U	1	-	380	519	212	241	94	126
Ga.	2	18	23	-	1	2	484	558	323	494	181	265
Fla.	1	56	55	1	23	12	244	525	865	956	124	102
E.S. CENTRAL	3	190	114	-	-	-	2,588	2,514	893	921	176	129
Ky.	-	8	56	-	-	-	139	135	192	213	17	12
Tenn.	2	150	18	-	-	-	568	685	294	265	56	34
Ala.	1	32	28	-	-	-	439	447	269	271	98	80
Miss.	-	-	12	N	N	N	1,442	1,247	138	172	5	3
W.S. CENTRAL	14	185	104	-	6	12	1,302	3,114	1,507	1,799	527	455
Ark.	3	28	18	-	-	-	82	346	113	180	21	20
La.	-	11	9	-	-	-	684	1,176	6	11	25	47
Okla.	1	23	22	-	-	4	54	108	129	167	31	24
Tex.	10	123	55	-	6	8	482	1,484	1,259	1,441	450	364
MOUNTAIN	7	348	340	-	4	4	180	192	397	337	95	100
Mont.	-	3	4	-	-	-	4	2	10	9	33	13
Idaho	-	77	42	-	-	-	-	1	9	11	1	2
Wyo.	-	1	-	-	-	-	4	-	1	4	20	15
Colo.	-	32	161	-	-	-	86	99	22	40	-	9
N. Mex.	3	70	19	-	-	-	32	18	56	43	3	3
Ariz.	4	142	95	-	3	-	22	37	206	141	27	42
Utah	-	18	17	-	1	3	4	9	19	29	7	10
Nev.	-	5	2	-	-	1	28	26	74	60	4	6
PACIFIC	29	443	535	-	27	29	370	623	2,927	3,572	209	207
Wash.	14	113	75	-	2	-	10	27	170	178	4	11
Oreg.	2	19	69	-	1	4	6	24	25	90	-	8
Calif.	13	275	376	-	21	21	353	567	2,579	3,091	201	157
Alaska	-	-	-	-	-	-	1	3	47	44	4	31
Hawaii	-	36	15	-	3	4	-	2	106	169	-	-
Guam	U	-	2	U	-	1	3	3	33	56	-	-
P.R.	-	6	2	-	-	-	168	205	123	116	26	60
V.I.	U	-	-	U	-	-	2	22	-	-	-	-
Amer. Samoa	U	-	1	U	-	-	-	1	3	3	-	-
C.N.M.I.	U	-	-	U	-	-	4	1	13	25	-	-

U: Unavailable -: no reported cases

TABLE III. Deaths in 121 U.S. cities,* week ending August 26, 1995 (34th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	561	393	96	55	10	6	26
Boston, Mass.	138	82	33	16	5	1	4
Bridgeport, Conn.	42	36	3	2	1	-	2
Cambridge, Mass.	16	15	1	-	-	-	1
Fall River, Mass.	21	19	2	-	-	-	-
Hartford, Conn.	42	27	9	5	-	1	-
Lowell, Mass.	34	22	10	2	-	-	2
Lynn, Mass.	13	7	4	2	-	-	-
New Bedford, Mass.	21	20	1	-	-	-	1
New Haven, Conn.	49	28	8	9	2	2	2
Providence, R.I.	48	37	7	4	-	-	3
Somerville, Mass.	5	4	1	-	-	-	-
Springfield, Mass.	38	28	5	4	1	-	6
Waterbury, Conn.	32	22	5	5	-	-	2
Worcester, Mass.	62	46	7	6	1	2	3
MID. ATLANTIC	2,293	1,503	428	272	48	41	117
Albany, N.Y.	46	36	7	1	2	-	4
Allentown, Pa.	26	18	4	2	2	-	-
Buffalo, N.Y.	101	78	13	8	1	1	-
Camden, N.J.	37	24	7	5	-	1	4
Elizabeth, N.J.	7	6	1	-	-	-	2
Erie, Pa.§	43	34	6	2	-	1	5
Jersey City, N.J.	38	25	4	8	-	1	-
New York City, N.Y.	1,279	816	244	171	23	25	56
Newark, N.J.	63	23	21	16	2	1	2
Paterson, N.J.	21	12	4	4	-	-	-
Philadelphia, Pa.	200	120	42	29	6	3	14
Pittsburgh, Pa.§	93	66	16	5	3	3	6
Reading, Pa.	13	12	1	-	-	-	1
Rochester, N.Y.	115	74	23	10	4	4	9
Schenectady, N.Y.	23	18	1	3	1	-	1
Scranton, Pa.§	30	23	6	1	-	-	1
Syracuse, N.Y.	86	61	17	4	4	-	6
Trenton, N.J.	37	29	6	2	-	-	5
Utica, N.Y.	17	14	3	-	-	-	1
Yonkers, N.Y.	18	14	2	1	-	1	-
E.N. CENTRAL	2,537	1,703	489	211	74	57	152
Akron, Ohio	50	36	8	4	2	-	-
Canton, Ohio	31	22	6	2	-	1	3
Chicago, Ill.	807	543	161	66	21	13	42
Cincinnati, Ohio	141	94	28	10	4	5	13
Cleveland, Ohio	142	88	34	13	2	5	1
Columbus, Ohio	169	107	34	15	7	6	10
Dayton, Ohio	107	78	18	10	-	1	8
Detroit, Mich.	234	137	56	29	7	5	6
Evansville, Ind.	37	27	5	2	2	1	1
Fort Wayne, Ind.	65	43	12	3	7	-	2
Gary, Ind.	22	13	4	4	1	-	-
Grand Rapids, Mich.	43	35	3	4	-	1	7
Indianapolis, Ind.	186	126	27	18	7	8	16
Madison, Wis.	52	37	11	1	2	1	6
Milwaukee, Wis.	120	78	25	12	1	4	12
Peoria, Ill.	36	28	5	1	-	2	3
Rockford, Ill.	47	30	10	4	1	2	6
South Bend, Ind.	75	61	8	4	1	1	3
Toledo, Ohio	108	78	20	6	4	-	11
Youngstown, Ohio	65	42	14	3	5	1	2
W.N. CENTRAL	788	553	124	54	24	21	48
Des Moines, Iowa	95	68	13	6	5	3	8
Duluth, Minn.	29	26	2	-	1	-	2
Kansas City, Kans.	41	26	9	2	4	-	2
Kansas City, Mo.	97	58	18	9	-	-	7
Lincoln, Nebr.	41	32	6	2	-	1	1
Minneapolis, Minn.	174	129	20	12	6	7	13
Omaha, Nebr.	77	52	12	7	4	2	5
St. Louis, Mo.	113	81	19	9	1	3	7
St. Paul, Minn.	42	29	8	1	-	4	2
Wichita, Kans.	79	52	17	6	3	1	1
S. ATLANTIC	1,351	788	296	183	55	27	71
Atlanta, Ga.	169	93	42	25	5	4	4
Baltimore, Md.	329	188	71	57	13	-	31
Charlotte, N.C.	101	70	19	9	2	1	5
Jacksonville, Fla.	119	76	24	13	4	2	6
Miami, Fla.	102	62	25	14	1	-	1
Norfolk, Va.	62	36	13	3	6	4	4
Richmond, Va.	73	39	19	9	5	1	2
Savannah, Ga.	49	22	12	7	6	2	3
St. Petersburg, Fla.	62	40	13	6	1	2	4
Tampa, Fla.	168	109	30	22	5	1	8
Washington, D.C.	109	48	28	17	6	10	3
Wilmington, Del.	8	5	-	1	1	-	-
E.S. CENTRAL	785	490	173	85	21	12	52
Birmingham, Ala.	130	75	27	18	5	2	4
Chattanooga, Tenn.	72	50	13	8	-	1	3
Knoxville, Tenn.	69	43	20	4	1	1	5
Lexington, Ky.	68	40	15	9	1	3	2
Memphis, Tenn.	185	117	43	16	8	1	16
Mobile, Ala.	52	36	7	6	1	1	4
Montgomery, Ala.	47	31	11	2	-	3	3
Nashville, Tenn.	162	98	37	22	5	-	15
W.S. CENTRAL	1,523	981	311	149	38	44	80
Austin, Tex.	80	48	21	6	1	4	7
Baton Rouge, La.	44	32	7	3	1	1	-
Corpus Christi, Tex.	41	32	7	1	-	1	2
Dallas, Tex.	206	121	40	27	9	9	4
El Paso, Tex.	81	54	14	9	-	4	7
Ft. Worth, Tex.	98	59	19	14	6	-	10
Houston, Tex.	349	219	81	36	6	7	20
Little Rock, Ark.	78	44	20	9	1	4	5
New Orleans, La.	134	83	24	17	7	3	-
San Antonio, Tex.	216	149	41	19	3	4	14
Shreveport, La.	69	52	12	2	1	2	6
Tulsa, Okla.	127	88	25	6	3	5	5
MOUNTAIN	861	555	152	106	37	11	49
Albuquerque, N.M.	80	59	10	10	1	-	3
Colo. Springs, Colo.	61	41	13	4	2	1	2
Denver, Colo.	79	47	15	13	2	2	3
Las Vegas, Nev.	188	120	43	21	3	1	7
Ogden, Utah	22	15	6	-	-	1	2
Phoenix, Ariz.	179	99	31	31	15	3	8
Pueblo, Colo.	25	18	5	1	1	-	4
Salt Lake City, Utah	92	53	13	15	9	2	7
Tucson, Ariz.	135	103	16	11	4	1	13
PACIFIC	1,739	1,148	321	187	49	28	130
Berkeley, Calif.	22	14	4	2	-	2	3
Fresno, Calif.	70	43	16	6	2	3	5
Glendale, Calif.	15	10	2	3	-	-	1
Honolulu, Hawaii	85	59	19	6	1	-	10
Long Beach, Calif.	66	49	9	6	1	1	4
Los Angeles, Calif.	416	258	87	51	12	3	22
Pasadena, Calif.	34	24	6	3	1	-	2
Portland, Oreg.	128	84	23	11	7	3	11
Sacramento, Calif.	187	136	24	21	1	5	15
San Diego, Calif.	141	92	24	20	4	1	16
San Francisco, Calif.	143	80	35	26	-	1	18
San Jose, Calif.	126	85	21	7	9	4	13
Santa Cruz, Calif.	35	26	4	3	2	-	3
Seattle, Wash.	128	88	19	12	5	4	-
Spokane, Wash.	43	32	8	1	2	-	2
Tacoma, Wash.	100	68	20	9	2	1	5
TOTAL	12,438¶	8,114	2,390	1,302	356	247	725

*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 -: no reported cases

Blood Lead Levels — Continued

2. CDC. Preventing lead poisoning in young children: a statement by the Centers for Disease Control. Atlanta: US Department of Health and Human Services, Public Health Service, 1991.
3. California Department of Health Services. Childhood lead poisoning in California: an update. In: California Morbidity. Berkeley, California: California Department of Health Services, June 1994:21–2.
4. Schlender TL, Fritz CJ, Murphy A, Shepeard S. Feasibility and effectiveness of screening for childhood lead poisoning in private medical practice. Archives of Pediatrics and Adolescent Medicine 1994;148:761–4.
5. Robin LF, Beller M, Middaugh JP. Childhood lead screening in Alaska, results of survey of blood lead levels among Medicaid-eligible children. Anchorage, Alaska: Alaska Department of Health Services, October 1994.
6. Wiley JF, Bell LM, Rosenblum LS, Nussbaum J, Tobin R, Henretig FM. Lead poisoning: low rates of screening and high prevalences among children seen in inner-city emergency departments. J Pediatr 1995;126:392–5.
7. CDC. Blood lead levels among children in high-risk areas—California, 1987–1990. MMWR 1992;41:291–4.
8. Baghurst PA, Tong Shi-Lu, McMichael AJ, Robertson EF, Wigg NR, Vimpani GV. Determinants of blood lead concentrations to age 5 years in a birth cohort study of children living in the lead smelting city of Port Pirie and surrounding areas. Archives of Environmental Health 1992;47:203–10.
9. Daniel K, Sedlis MH, Polk L, Dowuona-Hammond S, McCants B, Matte T. Childhood lead poisoning—New York City, 1988. MMWR 1990;39(no. SS-4).
10. Rooney BI, Hayes EB, Allen BK, Strutt PJ. Development of a screening tool for prediction of children at risk for lead exposure in a midwestern clinical setting. Pediatrics 1994;93:183–7.

Hypertension Among Mexican Americans — United States, 1982–1984 and 1988–1991

Since 1960, data have been collected on measured blood pressure for non-Hispanic whites and blacks. However, few data have been available about measured blood pressure for Mexican Americans (*1*). Until the release of data from the National Health and Nutrition Examination III, Phase I (NHANES III), the only source of blood pressure data for most of the Mexican American population in the United States was the Hispanic Health and Nutrition Examination Survey (HHANES). Data on measured blood pressure for other Hispanic subgoups (i.e., Cuban Americans and Puerto Ricans) were available in HHANES but not in NHANES III. To identify trends in prevalence, awareness, treatment, and control of hypertension among Mexican Americans aged 18–74 years, HHANES (conducted during 1982–1984) and NHANES III (conducted during 1988–1991) were analyzed. This report summarizes the results of that analysis.

CDC's HHANES and NHANES III are household interview and examination surveys of the U.S. civilian, noninstitutionalized population (*2,3*). HHANES sampled Mexican Americans* residing in Arizona, California, Colorado, New Mexico, and Texas; 84% of the total Mexican American population in 1980 resided in these states (*2*). NHANES III sampled Mexican Americans residing in the United States (*3*). All interviews were conducted by persons who were bilingual. Hypertension was defined as systolic blood pressure ≥140 mm/Hg, and/or diastolic blood pressure ≥90 mm/Hg, and/or taking antihypertensive medication (*4*). Analysis of characteristics of persons with hypertension included awareness status (being told by a health professional of having hypertension), treatment (taking antihypertensive medication), and control (taking

*For both surveys, Mexican Americans self-identified by responding to the question, "Which of those groups [specific groups listed] best represents your national origin or ancestry."

Hypertension — Continued

antihypertensive medication and/or having blood pressure <140/90 mm/Hg). Information about awareness and treatment of hypertension was collected during the household interview. The protocol to measure blood pressure was similar in both surveys and included the use of four cuff sizes, standardized training for examiners, and the performance of quality-control visits during data collection (*1*). However, HHANES included two blood pressure measures by a physician (*2*) and NHANES III included three blood pressure measures by a trained interviewer during the home interview, and three blood pressure measures by a physician during the examination (*3*). To maximize comparability between both surveys, for this report blood pressure was calculated using the average of the two measures taken in HHANES and the first two measures taken by the physician during the examination in NHANES III.

The prevalence of hypertension was calculated using a sample of 1552 men and 1952 women from HHANES and 1282 men and 1223 women from NHANES III. Data were weighted to provide estimates for the sampled populations (Mexican Americans residing in the Southwest [HHANES] and in the United States [NHANES III]). Standard errors were calculated using the Software for Survey Data Analysis. Prevalence estimates were age adjusted by the direct method to the 1980 U.S. population.

The overall age-adjusted prevalence of hypertension among Mexican Americans was similar during 1982–1984 (21.1%) and 1988–1991 (18.0%) (Table 1). Estimates also were similar for the sex-specific and age-specific prevalence of hypertension (Table 1) and for hypertension awareness, treatment, and control (Table 2).

Reported by: Office of Analysis, Epidemiology, and Health Promotion, and Div of Health Examination Statistics, National Center for Health Statistics, CDC.

Editorial Note: Although the overall prevalence of hypertension among Mexican Americans was similar during 1982–1984 (HHANES) and 1988–1991 (NHANES III), age- and sex-specific prevalences suggest a slight downward trend (except among men aged 40–49 years)—a finding consistent with an overall decline in the prevalence of hypertension in the United States (*1*). In contrast, among Mexican Americans with hypertension (particularly women), levels of awareness, treatment, and control of hypertension did not increase as they did among whites and blacks (*1*).

Low socioeconomic status and overweight are documented risk factors for hypertension (*5*). Despite the high prevalence of low socioeconomic status and overweight among Mexican Americans (*5*), the age-adjusted prevalence of hypertension among Mexican Americans is similar to the prevalence observed among whites (19.2%) and lower than that among blacks (30.2%) (*6*).

Despite similarities in the age-adjusted prevalences of hypertension among whites and Mexican Americans during 1988–1991, Mexican Americans had lower levels of control of hypertension (21.3%) than whites and blacks (*1*). One of the national health objectives for the year 2000 is to attain control of hypertension in 50% of Mexican Americans with this condition (objective 15.4b) (*7*).

The findings in this report are subject to at least two limitations. First, HHANES and NHANES used different sampling frames. However, the similarity of the prevalences of hypertension in both surveys supports the robustsness of the estimates despite the sampling variation. Second, the relatively short period between both surveys may have precluded detection of temporal changes in the prevalences of hypertension and hypertension awareness, treatment, and control.

TABLE 1. Prevalence of hypertension* among Mexican Americans aged 18–74 years, by age group and sex — United States, 1982–1984† and 1988–1991§

Age group (yrs)	Men				Women				Total			
	1982–1984		1988–1991		1982–1984		1988–1991		1982–1984		1988–1991	
	%	(SE¶)	%	(SE)	%	(SE)	%	(SE)	%	(SE)	%	(SE)
18–29	6.0	(1.0)	3.4	(0.9)	1.7	(0.4)	0.9	(0.8)	**3.9**	**(0.5)**	**2.3**	**(0.4)**
30–39	12.6	(2.3)	7.6	(1.6)	6.4	(1.4)	4.4	(0.8)	**9.5**	**(1.2)**	**6.0**	**(0.8)**
40–49	18.2	(1.9)	24.8	(2.2)	14.5	(2.1)	10.5	(1.2)	**16.2**	**(1.0)**	**17.8**	**(1.3)**
50–59	39.9	(4.5)	38.4	(3.9)	32.3	(3.0)	28.8	(6.2)	**35.6**	**(3.2)**	**33.5**	**(2.1)**
60–74	57.5	(2.8)	44.3	(5.3)	61.4	(2.4)	53.0	(3.0)	**59.6**	**(2.0)**	**49.0**	**(3.5)**
Total**	**23.0**	**(1.2)**	**19.7**	**(1.0)**	**19.3**	**(0.7)**	**16.1**	**(1.3)**	**21.1**	**(0.8)**	**18.0**	**(0.9)**

*Systolic blood pressure ≥140 mm/Hg, diastolic blood pressure ≥90 mm/Hg, and/or taking antihypertensive medication.
†Data from the Hispanic Health and Nutrition Examination Survey.
§Data from the Third National Health and Nutrition Examination Survey, Phase I.
¶Standard error.
**Age-adjusted by the direct method to the 1980 U.S. population.

TABLE 2. Prevalence of awareness, treatment, and control of hypertension* among Mexican Americans aged 18–74 years with hypertension, by age group and sex — United States, 1982–1984† and 1988–1991§

Age group (yrs)	Men				Women				Total			
	1982–1984		1988–1991		1982–1984		1988–1991		1982–1984		1988–1991	
	%	(SE¶)	%	(SE)	%	(SE)	%	(SE)	%	(SE)	%	(SE)
Awareness**												
18–59	43.9	(4.6)	42.0	(3.9)	75.4	(3.7)	72.8	(3.6)	**57.0**	**(3.2)**	**52.8**	**(3.2)**
60–74	54.5	(4.8)	57.1	(4.9)	76.4	(3.2)	73.6	(4.8)	**66.5**	**(3.4)**	**66.7**	**(2.7)**
Total	**46.8**	**(4.1)**	**45.5**	**(3.0)**	**75.8**	**(2.2)**	**73.1**	**(2.7)**	**60.0**	**(3.0)**	**57.2**	**(2.2)**
Treatment††												
18–59	16.6	(3.2)	19.5	(3.3)	54.1	(3.9)	48.8	(6.3)	**32.2**	**(2.7)**	**29.6**	**(4.6)**
60–74	36.8	(6.7)	46.5	(5.5)	59.7	(4.8)	55.7	(5.6)	**49.3**	**(4.9)**	**51.9**	**(3.3)**
Total	**22.0**	**(3.6)**	**25.7**	**(2.8)**	**56.3**	**(1.7)**	**51.8**	**(4.1)**	**37.7**	**(2.6)**	**36.7**	**(2.8)**
Control§§												
18–59	6.8	(2.0)	11.9	(2.2)	30.5	(2.8)	29.1	(4.7)	**16.7**	**(2.3)**	**17.8**	**(3.1)**
60–74	19.3	(5.0)	26.6	(6.5)	27.5	(4.3)	30.4	(8.3)	**23.8**	**(4.2)**	**28.8**	**(6.5)**
Total	**10.2**	**(2.5)**	**15.2**	**(1.6)**	**29.4**	**(2.2)**	**29.7**	**(4.8)**	**19.0**	**(2.1)**	**21.3**	**(2.4)**

*Systolic blood pressure ≥140 mm/Hg, diastolic blood pressure ≥90 mm/Hg, and/or taking antihypertensive medication.
† Data from the Hispanic Health and Nutrition Examination Survey.
§ Data from the Third National Health and Nutrition Examination Survey, Phase I.
¶ Standard error.
** Being told by a health professional of having hypertension.
†† Taking antihypertensive medication.
§§ Taking antihypertensive medication and having blood pressure <140/90 mm/Hg.

Hypertension — Continued

Although overall rates for Mexican Americans were similar in both surveys, some subgroups may have higher rates. Subsequent analysis of NHANES III, Phase II will provide information to further characterize trends in hypertension among Mexican Americans.

The lack of improvement in awareness, treatment, and control among hypertensive Mexican Americans in combination with a high prevalence of overweight and low educational attainment (*5*) indicate an increased risk for cardiovascular diseases for persons of Mexican descent as the population ages. This finding underscores the need to improve the awareness and treatment of hypertension among Mexican Americans.

References

1. Burt VL, Cutler JA, Higgins M, et al. Trends in the prevalence, awareness, treatment, and control of hypertension in the adult U.S. population: data from the health and examination surveys, 1960 to 1991. Hypertension 1995;26:60–9.
2. NCHS. Plan and operations of the Hispanic Health and Nutrition Examination Survey, 1982–84. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, CDC, 1985; DHHS publication no. (PHS)85-1321. (Vital and health statistics; series 1, no. 32).
3. NCHS. Plan and operation of the Third National Health and Nutrition Examination Survey, 1988–94. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, CDC, 1994; DHHS publication no. (PHS)94-1308. (Vital and health statistics; series 1, no. 32).
4. Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. The fifth report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure (JNC V). Arch Intern Med 1993;153:154–83.
5. Sorel JE, Ragland DR, Syme SL. Blood pressure in Mexican-Americans, whites and blacks: the Second National Health and Nutrition Examination Survey and the Hispanic Health and Nutrition Examination Survey. Am J Epidemiol 1991;134:370–8.
6. Burt VL, Whelton P, Roccella EJ, et al. Prevalence of hypertension in the U.S. adult population: results from the Third National Health and Nutrition Examination Survey, 1988–91. Hypertension 1995;25:305–13.
7. Public Health Service. Healthy people 2000: national health promotion and disease prevention objectives—midcourse review and 1995 revisions. Washington, DC: US Department of Health and Human Services, Public Health Service (in press).

Notice to Readers

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CDC's National Immunization Program will sponsor a live interactive satellite video conference, "Immunization Update," on September 7, 1995, from noon until 2:30 p.m. (eastern daylight time) to satellite downlink sites in 40 states. The course will provide updated information about varicella, hepatitis A, hepatitis B, and other vaccine-preventable diseases. Continuing Medical Education Credits and Continuing Education Units will be given to participants who complete the course. Physicians, physicians' assistants, nurse practitioners and their colleagues who give vaccinations or set policy for their offices, clinics, and communicable diseases/infection-control programs are invited to participate. Additional information is available through state immunization coordinators at state health departments.

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