

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Effectiveness in Disease and Injury Prevention

**Adolescent Suicide and Suicide Attempts —
Santa Fe County, New Mexico,
January 1985–May 1990**

In February 1990, a physician notified the Office of Epidemiology, New Mexico Department of Health (NMDH), of a possible cluster of suicides among high school students in Santa Fe County, New Mexico, after two male high school students committed suicide within a 4-day period. Because of concerns by school officials that the number of students attempting suicide in 1990 had increased, the NMDH began an epidemiologic investigation.

In 1989, there were an estimated 13,625 10- to 19-year-olds in Santa Fe County. Students attended one of three public high schools in the county, and one hospital provided emergency care; an Indian Health Service hospital provided care only to American Indians. A review of vital statistics data indicated that, from 1985 through 1988, three or fewer suicides occurred among 10- to 19-year-olds in the county each year, compared with six in 1989 ($p < 0.001$, Poisson distribution) (Table 1).

The emergency department (ED) log at the county hospital was reviewed to determine the number of persons <20 years of age who were evaluated because of

TABLE 1. Number and method of completed suicides among 10- to 19-year-old residents, by year — Santa Fe County, New Mexico, January 1985–May 1990

Year	No. completed suicides	Method of suicide
1985	1	Self-inflicted gunshot wound
1986	3	Self-inflicted gunshot wounds
1987	0	
1988	0	
1989	6	Self-inflicted gunshot wound (4 persons), drug ingestion (1), motor vehicle exhaust (1)
1990	2	Hanging (1), self-inflicted gunshot wound (1)

Adolescent Suicide — Continued

a suicide attempt or suicide ideation from January 1, 1986, through May 31, 1990. A case-patient was defined as a Santa Fe County resident <20 years of age who had had a physician diagnosis of either suicide attempt/gesture or suicide ideation. Because addresses were not listed in the ED log, county residents were identified by their home telephone number exchanges; persons who did not list a telephone number in the log were excluded from the review.

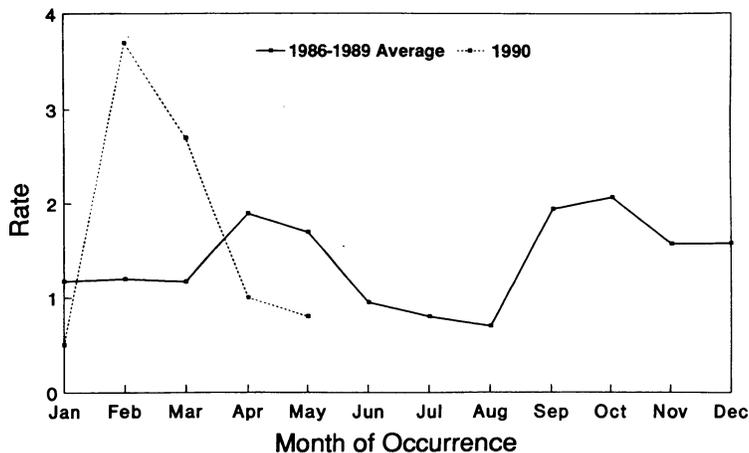
Two hundred eighteen persons who met the diagnostic criteria were evaluated in the hospital ED. Of these, 53 (24%) were excluded from the review because they had not listed a home telephone number. Of the 165 case-patients, seven (4%) had been evaluated twice. Case-patients ranged in age from 10 to 19 years (mean: 16 years); 102 (62%) were female, and 96 (58%) were hospitalized. Twenty-one (13%) were evaluated for suicide ideation, and 144 (87%) for a suicide attempt/gesture. Of those who had attempted suicide, 117 (81%) had ingested some type of drug, seven (5%) had had a self-inflicted laceration, one (1%) had had a self-inflicted gunshot wound, and one (1%) had attempted hanging. For 18 (13%) case-patients, the method of attempt was not specified.

Based on the total number of ED visits, the estimated rate of suicide attempts in February 1990 (3.7 per 1000 visits) was greater than the mean rate for February from 1986 through 1989 (1.2 per 1000) ($p=0.03$, Fisher's exact test) (Figure 1). In addition, for 1986–1989, rates during June, July, and August were consistently lower than during other months.

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Editorial Note: Although suicide clusters have been studied previously (1,2), understanding of the epidemiology of suicide clusters and attempts, and potential risk factors, is limited. For example, because ready access to firearms may contribute to

FIGURE 1. Rate* of suicide attempts among 10- to 19-year-old residents, by month — Santa Fe County, New Mexico, January 1986–May 1990



*Per 1000 visits to the county hospital emergency department.

Adolescent Suicide – Continued

completed suicides among teenagers, limiting access to firearms may help to reduce the rate of suicides for young persons (3). Among teenagers in Santa Fe County, firearms were used in eight of the 12 completed suicides from January 1985 through May 1990.

Difficulties in ascertaining the true number of suicide attempts are an important barrier to improved understanding of this problem. In Santa Fe County, there were limitations in using the ED log as a means of identifying suicide attempts: only those persons who sought care at the hospital, whose diagnosis fit the case definition, and who provided a home telephone number could be identified. Nonetheless, because mental health referral patterns and diagnosis patterns did not change during the period studied, the changes in the number of persons identified as having attempted suicide probably accurately reflected changes in the true incidence of suicide attempts in Santa Fe County during that period.

Because of the associations between the perception of suicide clusters and additional suicide attempts, communities should respond to an apparent suicide cluster even before confirming the existence of a statistically significant cluster (4). For example, as a result of the perceived cluster of suicides and attempts, Santa Fe County implemented an adolescent suicide prevention program at the two public high schools in the city and used CDC guidelines (5) to organize a community response team. Because rates of suicide attempts are higher among teenagers during the school year, school-based intervention measures may be effective in reducing the number of attempts and completed suicides.

References

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3. Sloan JH, Rivara FP, Reay DT, Ferris JA, Kellermann AL. Firearm regulations and rates of suicide: a comparison of two metropolitan areas. N Engl J Med 1990;322:369–73.
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5. CDC. CDC recommendations for a community plan for the prevention and containment of suicide clusters. MMWR 1988;37(no. S-6):1–12.

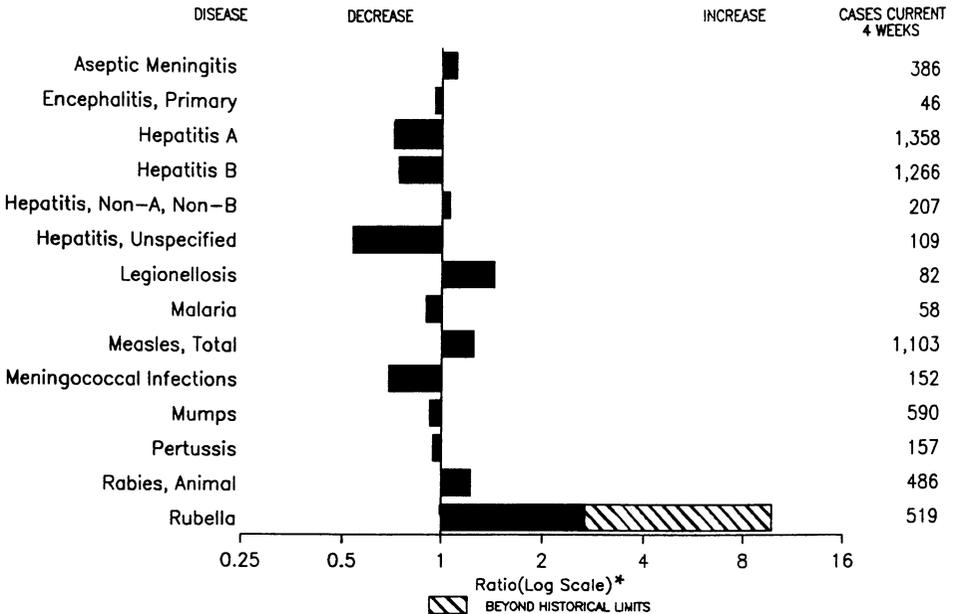
*Current Trends***Prevalence of Chronic Migraine Headaches –
United States, 1980–1989**

Migraine headaches, which are characterized by painful, disabling, and recurring symptoms, have no known cause, treatment, or cure. Quality population-based data are needed to improve epidemiologic understanding of chronic migraine headaches. This report uses data from the National Health Interview Survey (NHIS) to describe the prevalence of recent trends in the occurrence of chronic migraine headaches in the United States from 1980 through 1989.

Data for the NHIS were collected by CDC's National Center for Health Statistics (NCHS) through personal interviews with a representative sample of the civilian,

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FIGURE I. Notifiable disease reports, comparison of 4-week totals ending May 18, 1991, with historical data – United States



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

TABLE I. Summary – cases of specified notifiable diseases, United States, cumulative, week ending May 18, 1991 (20th Week)

	Cum. 1991		Cum. 1991
AIDS	15,394	Measles: imported	67
Anthrax	-	indigenous	4,952
Botulism: Foodborne	6	Plague	-
Infant	18	Poliomyelitis, Paralytic*	-
Other	4	Psittacosis	41
Brucellosis	18	Rabies, human	-
Cholera	11	Syphilis, primary & secondary	16,286
Congenital rubella syndrome	10	Syphilis, congenital, age < 1 year	12
Diphtheria	1	Tetanus	9
Encephalitis, post-infectious	27	Toxic shock syndrome	133
Gonorrhea	215,606	Trichinosis	8
<i>Haemophilus influenzae</i> (invasive disease)	1,414	Tuberculosis	7,652
Hansen Disease	42	Tularemia	25
Leptospirosis	26	Typhoid fever	113
Lyme Disease	1,478	Typhus fever, tickborne (RMSF)	41

*No cases of suspected poliomyelitis have been reported in 1991; none of the 6 suspected cases in 1990 have been confirmed to date. Five of 13 suspected cases in 1989 were confirmed and all were vaccine associated.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending May 18, 1991, and May 19, 1990 (20th Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionellosis	Lyme Disease
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
			Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991		
UNITED STATES	15,394	1,910	224	27	215,606	262,538	9,593	6,238	1,150	551	429	1,478
NEW ENGLAND	747	94	12	-	5,588	7,001	225	317	41	17	33	63
Maine	22	6	3	-	45	100	8	8	2	-	-	-
N.H.	16	7	1	-	128	85	17	9	4	-	1	4
Vt.	8	21	1	-	16	26	10	3	3	-	-	1
Mass.	446	29	6	-	2,296	2,712	120	249	25	15	30	37
R.I.	31	24	-	-	457	402	41	13	5	2	2	17
Conn.	224	7	2	-	2,646	3,676	29	35	2	-	-	4
MID. ATLANTIC	4,040	227	19	7	26,510	36,717	727	518	109	12	118	1,071
Upstate N.Y.	595	120	9	5	4,729	5,306	426	238	69	6	41	854
N.Y. City	2,051	15	-	-	10,141	15,858	61	20	-	-	3	-
N.J.	933	-	-	-	4,012	5,969	113	129	20	-	15	217
Pa.	461	92	10	2	7,628	9,584	127	131	20	6	59	-
E.N. CENTRAL	1,060	329	59	6	40,822	49,879	1,083	743	152	25	83	73
Ohio	244	109	17	2	12,442	15,456	169	190	80	10	43	44
Ind.	87	40	7	1	4,225	3,993	163	84	1	1	9	2
Ill.	450	64	12	3	12,743	14,986	450	93	18	1	2	-
Mich.	197	106	21	-	9,255	12,114	147	240	45	13	22	27
Wis.	82	10	2	-	2,157	3,330	154	136	8	-	7	-
W.N. CENTRAL	437	138	10	3	10,888	13,638	1,093	273	144	12	19	9
Minn.	92	28	5	-	1,077	1,700	145	26	10	2	4	2
Iowa	32	30	-	1	772	1,006	29	16	6	2	3	5
Mo.	242	55	3	2	6,684	7,967	271	188	124	5	6	-
N. Dak.	4	-	-	-	23	58	23	3	2	1	-	-
S. Dak.	1	4	2	-	141	81	445	2	-	-	3	-
Nebr.	28	7	-	-	762	697	145	19	1	-	3	-
Kans.	38	14	-	-	1,429	2,129	35	19	1	2	-	2
S. ATLANTIC	3,792	467	40	9	64,545	73,195	669	1,359	175	115	70	72
Del.	35	8	1	-	888	1,185	6	21	3	2	-	12
Md.	400	50	5	-	6,474	7,367	133	193	33	7	16	31
D.C.	245	12	-	-	3,911	4,593	40	49	1	1	-	-
Va.	288	83	10	-	6,360	6,689	73	86	9	84	5	11
W. Va.	21	2	1	-	471	518	9	28	1	4	-	3
N.C.	160	44	14	-	12,068	12,339	79	234	75	-	10	8
S.C.	136	13	-	-	4,798	6,168	20	307	16	3	8	1
Ga.	605	40	6	1	16,606	16,302	68	174	15	-	7	2
Fla.	1,902	215	3	8	12,969	18,034	241	267	22	14	24	4
E.S. CENTRAL	402	113	13	-	19,456	22,123	89	534	145	3	25	45
Ky.	64	28	3	-	1,971	2,530	10	68	5	2	11	16
Tenn.	126	26	6	-	7,539	7,161	57	400	134	-	7	22
Ala.	128	42	4	-	4,768	7,368	21	63	6	1	7	7
Miss.	84	17	-	-	5,178	5,064	1	3	-	-	-	-
W.S. CENTRAL	1,366	170	20	1	23,854	27,460	1,389	747	34	84	16	28
Ark.	57	27	2	-	2,727	3,538	135	45	1	2	2	9
La.	277	26	4	-	5,632	5,164	63	114	3	3	5	-
Okla.	71	1	3	-	2,487	2,443	134	94	15	8	4	18
Tex.	961	116	11	1	13,008	16,315	1,057	494	15	71	5	1
MOUNTAIN	450	68	10	1	4,327	5,504	1,659	384	58	83	37	4
Mont.	10	2	-	-	38	64	53	31	3	4	1	-
Idaho	8	-	-	-	64	42	30	31	-	-	2	-
Wyo.	6	-	-	-	44	77	75	5	-	-	-	3
Colo.	192	21	2	1	1,147	1,508	216	55	15	12	6	-
N. Mex.	46	8	-	-	416	475	498	80	7	25	1	-
Ariz.	90	19	8	-	1,642	2,107	511	79	9	36	14	-
Utah	19	8	-	-	135	169	129	19	10	6	4	-
Nev.	79	10	-	-	841	1,062	147	84	14	-	9	1
PACIFIC	3,100	304	41	-	19,616	27,021	2,659	1,363	292	200	28	113
Wash.	183	-	4	-	1,656	2,490	251	200	69	9	1	-
Oreg.	80	-	-	-	757	965	156	133	49	4	1	-
Calif.	2,763	277	35	-	16,657	22,885	2,170	993	163	186	25	113
Alaska	9	8	2	-	286	468	69	13	9	1	-	-
Hawaii	65	19	-	-	260	213	13	24	2	-	1	-
Guam	1	-	-	-	-	102	-	-	-	-	-	-
P.R.	491	105	-	1	253	347	47	168	53	22	-	-
V.I.	3	-	-	-	222	169	-	4	-	-	-	-
Amer. Samoa	-	-	-	-	-	45	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	90	-	-	-	-	-	-

N: Not notifiable

U: Unavailable

C.N.M.I.: Commonwealth of the Northern Mariana Islands

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending May 18, 1991, and May 19, 1990 (20th Week)

Reporting Area	Measles (Rubeola)					Meningococcal Infections	Mumps		Pertussis			Rubella			
	Indigenous		Imported*		Total		1991	Cum. 1991	1991	Cum. 1991	Cum. 1990	1991	Cum. 1991	Cum. 1990	
	1991	Cum. 1991	1991	Cum. 1991	Cum. 1990										
UNITED STATES	347	263	4,952	1	67	8,882	946	153	1,972	62	803	1,168	247	813	350
NEW ENGLAND	26	4	20	1	5	149	66	3	14	33	131	141	1	2	4
Maine	1	-	-	-	-	27	5	-	-	28	32	4	-	-	-
N.H.	2	-	-	-	-	8	6	-	3	-	12	10	-	1	1
Vt.	1	-	5	-	-	1	10	1	1	-	3	6	-	-	-
Mass.	14	2	7	15	3	5	35	-	-	5	76	112	1	1	-
R.I.	5	2	2	-	-	30	-	-	2	-	-	-	-	-	-
Conn.	3	-	6	-	2	78	10	2	8	-	8	9	-	-	2
MID. ATLANTIC	38	34	2,636	-	2	744	97	6	160	5	80	281	234	423	2
Upstate N.Y.	12	-	1	-	-	258	56	3	60	5	53	225	232	407	1
N.Y. City	4	-	1,000	-	-	109	2	-	-	-	-	-	-	-	-
N.J.	17	-	303	-	1	95	16	-	48	-	1	14	-	-	-
Pa.	5	34	1,332	-	1	282	23	3	52	-	26	42	2	16	1
E.N. CENTRAL	25	-	59	-	5	2,803	130	10	179	7	147	290	-	162	26
Ohio	6	-	-	-	1	210	45	5	37	2	63	48	-	147	-
Ind.	1	-	-	-	-	322	8	-	5	5	33	41	-	1	-
Ill.	9	-	24	-	-	1,155	41	-	76	-	23	109	-	3	15
Mich.	8	-	33	-	-	390	28	5	54	-	19	33	-	11	9
Wis.	1	-	2	-	3	726	8	-	7	-	9	59	-	-	2
W.N. CENTRAL	14	4	22	-	2	394	52	2	64	-	51	40	2	10	3
Minn.	3	1	4	-	2	118	11	1	6	-	16	6	1	5	1
Iowa	3	-	15	-	-	22	3	-	13	-	4	4	1	4	1
Mo.	4	-	-	-	-	61	23	1	18	-	19	24	-	1	-
N. Dak.	1	-	-	-	-	-	1	-	-	-	1	1	-	-	1
S. Dak.	1	-	-	-	-	15	1	-	-	-	1	1	-	-	-
Nebr.	1	-	-	-	-	99	3	-	3	-	4	1	-	-	-
Kans.	3	3	3	-	-	79	10	-	24	-	6	3	-	-	-
S. ATLANTIC	76	26	296	-	9	554	176	91	751	3	56	102	-	9	12
Del.	1	1	21	-	-	9	1	-	3	-	-	2	-	-	-
Md.	25	3	118	-	-	76	19	9	147	-	7	25	-	6	1
D.C.	4	-	-	-	-	15	3	1	18	-	-	13	-	1	1
Va.	12	-	18	-	3	50	13	6	31	-	9	9	-	-	-
W. Va.	1	-	-	-	-	6	6	1	13	-	6	9	-	-	-
N.C.	2	18	19	-	-	4	40	2	118	3	10	18	-	-	-
S.C.	5	-	12	-	-	3	22	68	266	-	-	5	-	-	-
Ga.	10	-	-	-	-	18	38	-	19	-	16	13	-	-	-
Fla.	16	4	108	-	6	373	34	4	136	-	8	8	-	2	10
E.S. CENTRAL	4	-	4	-	-	66	72	4	98	3	24	46	-	83	1
Ky.	1	-	-	-	-	4	30	-	-	-	-	-	-	-	-
Tenn.	1	-	4	-	-	28	19	4	81	-	10	22	-	83	1
Ala.	2	-	-	-	-	8	23	-	4	3	14	22	-	-	-
Miss.	-	-	-	-	-	26	-	-	13	-	-	2	-	-	-
W.S. CENTRAL	21	-	12	-	10	1,215	71	16	228	1	19	17	-	1	1
Ark.	2	-	-	-	5	26	13	-	35	-	-	1	-	1	1
La.	4	-	-	-	-	10	16	1	13	-	8	2	-	-	-
Okla.	1	-	-	-	-	136	9	-	6	1	11	14	-	-	-
Tex.	14	-	12	-	5	1,043	33	15	174	-	-	-	-	-	-
MOUNTAIN	12	91	381	-	12	457	44	8	141	2	110	103	1	2	25
Mont.	1	-	-	-	-	1	5	-	-	-	-	4	-	-	13
Idaho	1	67	68	-	2	20	7	-	5	-	18	21	-	-	7
Wyo.	-	-	-	-	-	8	1	-	3	-	3	-	-	-	-
Colo.	3	-	1	-	1	67	8	5	53	1	54	49	-	-	3
N. Mex.	1	3	92	-	5	85	6	N	N	-	15	7	-	-	-
Ariz.	5	-	180	-	-	134	13	-	59	-	8	13	-	-	-
Utah	1	19	25	-	4	4	-	-	11	-	10	5	-	-	1
Nev.	-	2	15	-	-	138	4	3	10	1	2	4	1	2	1
PACIFIC	131	104	1,522	-	22	2,500	238	13	337	8	185	148	9	121	276
Wash.	10	-	1	-	3	189	31	-	81	-	48	33	-	-	-
Oreg.	3	5	25	-	11	156	28	N	N	-	28	16	-	1	-
Calif.	114	99	1,494	-	7	2,072	172	12	238	8	78	83	9	118	269
Alaska	-	-	-	-	1	79	6	-	7	-	5	-	-	-	-
Hawaii	4	-	2	-	-	4	1	1	11	-	26	16	-	2	7
Guam	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
P.R.	1	2	40	-	1	808	15	-	8	-	13	4	-	1	-
V.I.	-	U	-	U	-	2	-	U	5	U	-	-	U	-	-
Amer. Samoa	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
C.N.M.I.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

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

N: Not notifiable U: Unavailable ¹International ²Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending May 18, 1991, and May 19, 1990 (20th Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic- shock Syndrome	Tuberculosis		Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991
UNITED STATES	16,286	18,808	133	7,652	8,191	25	113	41	2,062
NEW ENGLAND	452	746	6	205	189	-	9	2	5
Maine	-	5	3	-	-	-	1	-	-
N.H.	10	35	1	-	3	-	-	-	1
Vt.	1	1	-	1	2	-	-	-	-
Mass.	223	272	2	115	101	-	8	1	-
R.I.	19	5	-	20	30	-	-	-	-
Conn.	199	428	-	69	53	-	-	1	4
MID. ATLANTIC	2,926	4,049	20	1,798	1,996	-	17	-	624
Upstate N.Y.	103	302	11	127	193	-	5	-	241
N.Y. City	1,457	1,902	-	1,098	1,179	-	4	-	-
N.J.	599	589	-	329	338	-	6	-	283
Pa.	767	1,256	9	244	286	-	2	-	100
E.N. CENTRAL	1,760	1,237	26	839	753	1	11	-	35
Ohio	229	201	17	113	101	-	2	-	5
Ind.	50	12	-	54	45	-	-	-	-
Ill.	859	463	4	455	391	-	3	-	7
Mich.	436	400	5	178	186	1	5	-	6
Wis.	186	161	-	39	30	-	1	-	17
W.N. CENTRAL	272	168	26	208	195	6	2	2	294
Minn.	30	39	7	37	37	-	2	-	111
Iowa	23	20	5	29	23	-	-	-	54
Mo.	176	81	6	94	90	6	-	2	6
N. Dak.	-	1	-	2	9	-	-	-	27
S. Dak.	1	-	1	16	4	-	-	-	70
Nebr.	7	6	1	8	11	-	-	-	8
Kans.	35	20	6	22	21	-	-	-	18
S. ATLANTIC	4,931	5,953	13	1,384	1,498	3	21	24	519
Del.	63	76	1	11	20	-	-	-	63
Md.	394	443	-	127	135	-	5	1	188
D.C.	319	354	-	82	53	-	1	-	5
Va.	409	346	3	109	123	-	4	-	107
W. Va.	11	6	-	34	27	-	1	-	25
N.C.	736	689	7	156	177	1	-	18	-
S.C.	599	315	-	154	171	-	-	2	43
Ga.	1,196	1,502	-	268	224	1	4	3	75
Fla.	1,204	2,222	2	443	568	1	6	-	13
E.S. CENTRAL	1,732	1,590	6	418	636	2	1	5	67
Ky.	34	28	3	109	147	1	1	1	18
Tenn.	650	634	3	42	178	1	-	2	18
Ala.	608	512	-	141	203	-	-	2	31
Miss.	440	416	-	126	108	-	-	-	-
W.S. CENTRAL	2,862	2,998	4	829	959	8	5	7	293
Ark.	229	209	2	71	96	3	-	-	14
La.	941	921	-	68	129	-	1	-	4
Okla.	60	90	2	50	79	5	-	7	85
Tex.	1,632	1,778	-	640	655	-	4	-	190
MOUNTAIN	219	330	17	199	164	4	4	1	63
Mont.	2	-	-	-	10	3	-	1	11
Idaho	3	5	-	2	4	-	-	-	1
Wyo.	1	1	-	2	1	1	-	-	36
Colo.	25	26	2	6	6	-	-	-	-
N. Mex.	13	18	5	9	31	-	-	-	1
Ariz.	155	229	4	126	79	-	3	-	12
Utah	4	4	6	25	10	-	-	-	-
Nev.	16	47	-	29	23	-	1	-	2
PACIFIC	1,132	1,737	15	1,772	1,801	1	43	-	162
Wash.	54	189	1	116	107	1	-	-	-
Oreg.	28	50	-	39	51	-	2	-	1
Calif.	1,043	1,480	14	1,523	1,541	-	40	-	157
Alaska	3	6	-	20	20	-	-	-	3
Hawaii	4	12	-	74	82	-	1	-	1
Guam	-	1	-	-	22	-	-	-	-
P.R.	186	150	-	71	29	-	3	-	18
V.I.	52	1	-	1	3	-	-	-	-
Amer. Samoa	-	-	-	-	11	-	-	-	-
C.N.M.I.	-	1	-	-	22	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending May 18, 1991 (20th Week)

Reporting Area	All Causes, By Age (Years)						P&I**	Total	Reporting Area	All Causes, By Age (Years)						P&I**	Total
	All Ages	≥65	45-64	25-44	1-24	<1				All Ages	≥65	45-64	25-44	1-24	<1		
NEW ENGLAND	629	443	107	47	14	18	46	S. ATLANTIC	1,230	740	256	136	54	42	62		
Boston, Mass.	180	119	35	13	5	8	23	Atlanta, Ga.	149	89	31	21	6	2	11		
Bridgport, Conn.	45	33	7	4	-	1	3	Baltimore, Md.	182	107	40	19	13	3	12		
Cambridge, Mass.	19	15	2	2	-	-	-	Charlotte, N.C.	92	58	16	14	2	2	3		
Fall River, Mass.	20	18	2	-	-	-	-	Jacksonville, Fla.	110	67	25	9	5	4	5		
Hartford, Conn.	66	45	9	6	-	6	2	Miami, Fla.	123	60	26	20	8	8	-		
Lowell, Mass.	29	17	9	2	1	-	1	Norfolk, Va.	40	23	5	7	3	2	1		
Lynn, Mass.	15	13	1	1	-	-	-	Richmond, Va.	94	52	21	7	2	12	6		
New Bedford, Mass.	22	20	1	1	-	-	1	Savannah, Ga.	55	36	13	4	1	1	3		
New Haven, Conn.	39	21	9	4	5	-	3	St. Petersburg, Fla.	66	51	7	5	1	2	2		
Providence, R.I.	53	39	9	5	-	-	5	Tampa, Fla.	151	104	36	10	-	1	17		
Somerville, Mass.	11	8	3	-	-	-	3	Washington, D.C.	153	82	33	20	13	4	2		
Springfield, Mass.	51	37	9	2	2	1	4	Wilmington, Del.	15	11	3	-	-	1	-		
Waterbury, Conn.	26	21	3	2	-	-	1	E.S. CENTRAL	717	462	154	66	16	18	50		
Worcester, Mass.	53	37	8	5	1	2	-	Birmingham, Ala.	126	70	27	15	6	8	1		
MID. ATLANTIC	2,563	1,666	486	267	71	72	139	Chattanooga, Tenn.	44	30	9	4	1	-	5		
Albany, N.Y.	47	28	11	4	2	2	3	Knoxville, Tenn.	85	57	22	6	-	-	11		
Allentown, Pa.	14	11	1	1	1	-	-	Louisville, Ky.§	U	U	U	U	U	U	U		
Buffalo, N.Y.	100	65	24	5	3	3	4	Memphis, Tenn.	170	109	43	14	3	1	15		
Camden, N.J.	27	12	11	2	-	2	-	Mobile, Ala.	140	98	21	14	3	3	8		
Elizabeth, N.J.	11	5	3	2	1	-	-	Montgomery, Ala.§	U	U	U	U	U	U	U		
Erie, Pa.†	41	34	4	2	-	1	7	Nashville, Tenn.	152	98	32	13	3	6	10		
Jersey City, N.J.	63	37	13	10	2	1	1	W.S. CENTRAL	1,427	890	299	152	53	33	89		
New York City, N.Y.	1,334	867	239	170	29	29	57	Austin, Tex.	62	37	12	8	3	2	5		
Newark, N.J.	58	28	13	12	1	3	5	Baton Rouge, La.	69	34	23	9	1	2	3		
Paterson, N.J.	38	20	10	5	2	1	2	Corpus Christi, Tex.	47	33	11	2	-	1	3		
Philadelphia, Pa.	406	255	86	34	16	15	29	Dallas, Tex.	217	130	43	28	8	8	8		
Pittsburgh, Pa.†	73	50	15	3	1	4	3	El Paso, Tex.	96	59	16	13	5	3	5		
Reading, Pa.	112	27	3	3	-	1	4	Ft. Worth, Tex.	86	48	21	8	4	5	4		
Rochester, N.Y.	34	86	15	7	1	3	12	Houston, Tex.	341	203	72	40	19	7	30		
Schenectady, N.Y.	27	21	5	1	-	-	1	Little Rock, Ark.	59	38	15	4	1	1	5		
Scranton, Pa.†	24	15	6	-	3	-	-	New Orleans, La.	113	71	22	14	3	3	-		
Syracuse, N.Y.	85	58	10	5	6	6	5	San Antonio, Tex.	178	123	33	14	7	1	11		
Trenton, N.J.	34	24	7	-	2	1	4	Shreveport, La.	64	53	9	1	1	-	6		
Utica, N.Y.	9	8	1	-	-	-	2	Tulsa, Okla.	95	61	22	11	1	-	9		
Yonkers, N.Y.	26	15	9	1	1	-	4	MOUNTAIN	742	498	139	68	23	24	56		
E.N. CENTRAL	2,226	1,350	446	217	115	98	118	Albuquerque, N.M.	85	58	15	11	1	-	3		
Akron, Ohio	56	40	12	3	-	1	9	Colo. Springs, Colo.	63	37	15	6	2	3	9		
Canton, Ohio	28	23	4	1	-	-	3	Denver, Colo.	98	65	18	11	2	2	14		
Chicago, Ill.	469	183	100	89	64	33	9	Las Vegas, Nev.	140	91	23	13	5	8	10		
Cincinnati, Ohio	125	92	20	9	1	3	17	Ogden, Utah	21	21	-	-	-	-	6		
Cleveland, Ohio	165	97	41	17	4	6	1	Phoenix, Ariz.	143	86	32	14	7	4	2		
Columbus, Ohio	170	96	43	13	5	13	6	Pueblo, Colo.	19	14	2	2	-	1	-		
Dayton, Ohio	136	95	23	10	5	3	13	Salt Lake City, Utah	46	27	9	3	5	2	6		
Detroit, Mich.	228	134	44	21	11	18	5	Tucson, Ariz.	127	89	25	8	1	4	6		
Evansville, Ind.	41	32	7	2	-	3	-	PACIFIC	1,866	1,275	322	170	49	45	119		
Fort Wayne, Ind.	56	40	9	4	2	1	1	Berkeley, Calif.	16	13	1	2	-	-	2		
Gary, Ind.	20	11	2	4	3	-	-	Fresno, Calif.	66	44	12	4	2	4	4		
Grand Rapids, Mich.	49	36	11	2	-	-	8	Glendale, Calif.	32	24	5	1	1	-	-		
Indianapolis, Ind.	186	114	37	20	6	9	10	Honolulu, Hawaii	74	54	15	2	2	1	6		
Madison, Wis.	56	39	11	4	2	-	8	Long Beach, Calif.	62	43	11	4	4	-	6		
Milwaukee, Wis.	160	119	28	9	2	2	11	Los Angeles, Calif.	520	372	77	46	16	7	24		
Peoria, Ill.	34	26	4	-	1	3	1	Oakland, Calif.§	U	U	U	U	U	U	U		
Rockford, Ill.	50	31	13	2	3	1	-	Pasadena, Calif.	34	20	8	1	1	4	-		
South Bend, Ind.	36	25	6	2	2	1	2	Portland, Oreg.	138	102	20	8	3	5	7		
Toledo, Ohio	84	59	18	2	2	3	6	Sacramento, Calif.	141	88	29	14	5	5	11		
Youngstown, Ohio	77	58	13	3	2	1	4	San Diego, Calif.	157	100	23	23	5	6	20		
W.N. CENTRAL	741	523	129	43	16	30	38	San Francisco, Calif.	165	91	37	29	4	3	9		
Des Moines, Iowa	88	58	20	6	2	2	7	San Jose, Calif.	155	107	29	12	2	5	14		
Duluth, Minn.	24	24	-	-	-	-	-	Seattle, Wash.	160	109	29	17	3	2	6		
Kansas City, Kans.	30	21	6	2	-	1	2	Spokane, Wash.	54	42	9	-	-	3	4		
Kansas City, Mo.	102	77	14	6	2	3	3	Tacoma, Wash.	92	66	17	7	1	-	6		
Lincoln, Nebr.	41	35	5	-	1	-	5	TOTAL	12,141††	7,837	2,338	1,166	411	380	717		
Minneapolis, Minn.	171	115	34	9	4	9	11										
Omaha, Nebr.	78	47	19	7	1	4	2										
St. Louis, Mo.	126	89	16	9	4	8	2										
St. Paul, Minn.	36	26	6	1	-	3	4										

*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.

§Report for this week is unavailable (U).

Migraine Headaches – Continued

noninstitutionalized U.S. population. Information regarding chronic migraine headaches was obtained through a checklist of medical conditions (i.e., the respondent answered "yes" to the question, "During the past 12 months, did anyone in the family have [a] migraine headache?") or from reports of migraine headaches that restricted or limited activity or resulted in hospitalization. For the 10-year period, sample sizes ranged from approximately 60,000 to 125,000 persons. The data for 1980 are annual averages based on data from 1979 through 1981.

From 1980 through 1989, the prevalence of chronic migraine headaches in the United States increased nearly 60%, from 25.8 per 1000 persons (1) to 41.0 per 1000 persons (Table 1). Most (71%) of the increase occurred among persons <45 years of age. Because of sampling variability, differences between estimates based on single years of data may not be statistically significant, but comparisons between the 3-year averages for 1979–1981 (1) and 1986–1988 (NCHS, unpublished data) indicate a more than 40% increase in the prevalence of migraine headaches, from 25.8 to 36.7 per 1000 population.

In each year, the prevalence of migraine headaches was greater among women than men in each age group (Table 1). In addition, the rate of change was greater among women: from 1980 through 1989, the prevalence among women <45 years of age increased 77%, compared with a 64% increase among men.

The 3-year annual average of data from 1986 through 1988 showed that more than 80% of women and 70% of men reporting chronic migraine headaches had at least one physician contact per year because of migraine headaches; 8% and 7% of women and men, respectively, were hospitalized at least once a year because of the condition (NCHS, unpublished data). In addition, chronic migraine headaches had a substantial impact on functional capacity: 4% of men and 3% of women reported a chronic limitation in normal activity because of migraine headaches and associated symptoms.

In 1989, the prevalence of migraine headaches was highest in the western United States (45.4 per 1000 persons). In comparison, rates in the south and midwest were 41.0 and 40.4, respectively; rates were lowest in the northeast (36.9 per 1000). In addition, during 1986–1988, within each age group the prevalence of chronic migraine headaches was highest in the west and lowest in the northeast (Figure 1).

TABLE 1. Prevalence* of chronic migraine headaches per year, by patient sex and age – United States, 1980 and 1982–1989[†]

Sex/Age (yrs)	1980 [‡]	1982	1983	1984	1985	1986	1987	1988	1989
Male									
<45	14.4	17.0	15.2	20.3	19.5	18.1	18.5	24.0	23.6
45–64	14.9	23.7	22.0	23.8	18.7	25.0	22.9	20.8	24.8
≥65	7.6	13.4	7.8	3.3	13.4	4.8	7.3	8.8	17.5
Female									
<45	33.3	45.6	46.7	47.0	54.9	53.7	54.5	55.4	58.9
45–64	55.8	73.5	61.0	55.1	61.6	64.2	66.6	67.9	75.5
≥65	23.1	23.3	23.2	25.8	17.8	32.1	21.5	25.3	26.5
Total	25.8	33.6	31.6	33.0	35.6	36.0	35.8	38.3	41.0

*Per 1000 population.

[†]95% confidence interval for 1980 = ±1.8; for 1982–1985 and 1987–1989, 2.7–3.4; and for 1986, ±4.0.

[‡]Estimates for 1980 are averages based on data years 1979–1981.

Migraine Headaches — Continued

Reported by: *Illness Disability Statistics Br, Div of Health Interview Statistics, and National Ambulatory Medical Care Survey, Div of Health Care Statistics, National Center for Health Statistics, CDC.*

Editorial Note: Chronic migraine headaches are classified either as "common" or "classical." Manifestations of the common migraine headache include nausea, dizziness, fever, and general malaise. The classical migraine headache is most noted for an aura that immediately precedes the headache. In addition, the classical migraine headache is characterized by a relatively short duration (≤ 12 hours) compared with the common migraine headache (up to 4 days) (2).

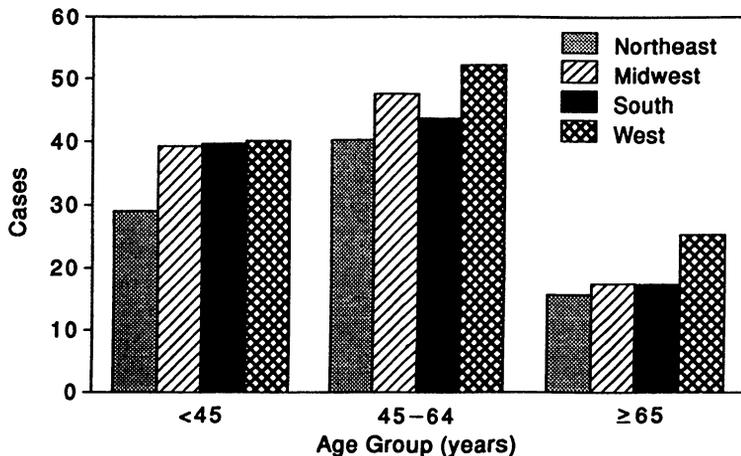
Although epidemiologic and clinical studies have not clearly defined the etiology of chronic migraine headaches, potential risk factors include diet, allergy, air quality, and stress (3,4). Reasons for the variations in prevalence of chronic migraine headaches by region are unclear but may reflect differences in the prevalence of risk factors, diagnostic practices, or the reporting behavior of NHIS respondents.

NHIS data on migraine headaches are collected on an ongoing basis using a standardized questionnaire and may be used as a source for surveillance of this problem. Both the increase of chronic migraine headache prevalence and the high level of medical care use and extensive disability (reflected by days of restricted activity) for this poorly understood condition suggest the need for further investigation of etiology and the need for improved treatment to ameliorate or reduce the disability.

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FIGURE 1. Prevalence* of chronic migraine headaches, by patient age and region — United States, 1986–1988



*Per 1000 population.

Notices to Readers

Publication of Annual Report on the Nation's Health

CDC's National Center for Health Statistics has issued *Health, United States, 1990*. The report includes a chartbook section on minority health, with detailed racial/ethnic data on major health indicators and a review of the health of and health care for the nation. The report also provides data on a wide range of health measures. Specific findings include generally lower levels of health and health care among blacks, American Indians, and Puerto Ricans, as well as better health status and access to health care among whites, Cubans, and Asians.

Health, United States, 1990 is available from the Superintendent of Documents, Government Printing Office (GPO), Washington, DC 20402; telephone (202) 783-3238; stock no. 017-022; price \$18.00. Tables from the report are available on diskette in spread-sheet format to facilitate additional data analysis; for copies of the diskette, contact GPO's Electronic Media Order Desk; telephone (202) 275-0186.

Publication of Report on Firearm Mortality Among Children, Youth, and Young Adults

CDC's National Center for Health Statistics (NCHS) has released a report that addresses the increasingly high rate of deaths from firearms among children, youth, and young adults. The report, *Firearm Mortality Among Children, Youth, and Young Adults 1-34 Years of Age, Trends and Current Status: United States, 1979-88*, presents a detailed analysis of trends since 1979 on firearm-attributable homicides, suicides, and unintentional deaths.

Copies of the report are available free of charge from the Scientific and Technical Information Branch, NCHS, CDC, Room 1064, 6525 Belcrest Road, Hyattsville, MD 20782; telephone (301) 436-8500.

Report on Use of Selected Medical Device Implants

The first national data about the use of selected medical device implants are available from CDC's National Center for Health Statistics (NCHS). The information was collected during 1988 by NCHS' ongoing National Health Interview Survey in collaboration with the Food and Drug Administration's Center for Devices and Radiological Health.

The report provides estimates of the number of persons with implants, types of implants, length of time implants have been in use, implant replacements, and reasons for and problems with implants. Data are presented by patient age, sex, race/ethnicity, family income, poverty status, education, geographic region, place of residence, activity limitation, and respondent-assessed health status.

The report, *Use of Medical Device Implants in the United States, 1988*, is available free of charge from the Scientific and Technical Information Branch, NCHS, CDC, Room 1064, 6525 Belcrest Road, Hyattsville, MD 20782; telephone (301) 436-8500.

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

The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday. Accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials, as well as matters pertaining to editorial or other textual considerations should be addressed to: Editor, *Morbidity and Mortality Weekly Report*, Mailstop C-08, Centers for Disease Control, Atlanta, Georgia 30333; telephone (404) 332-4555.

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